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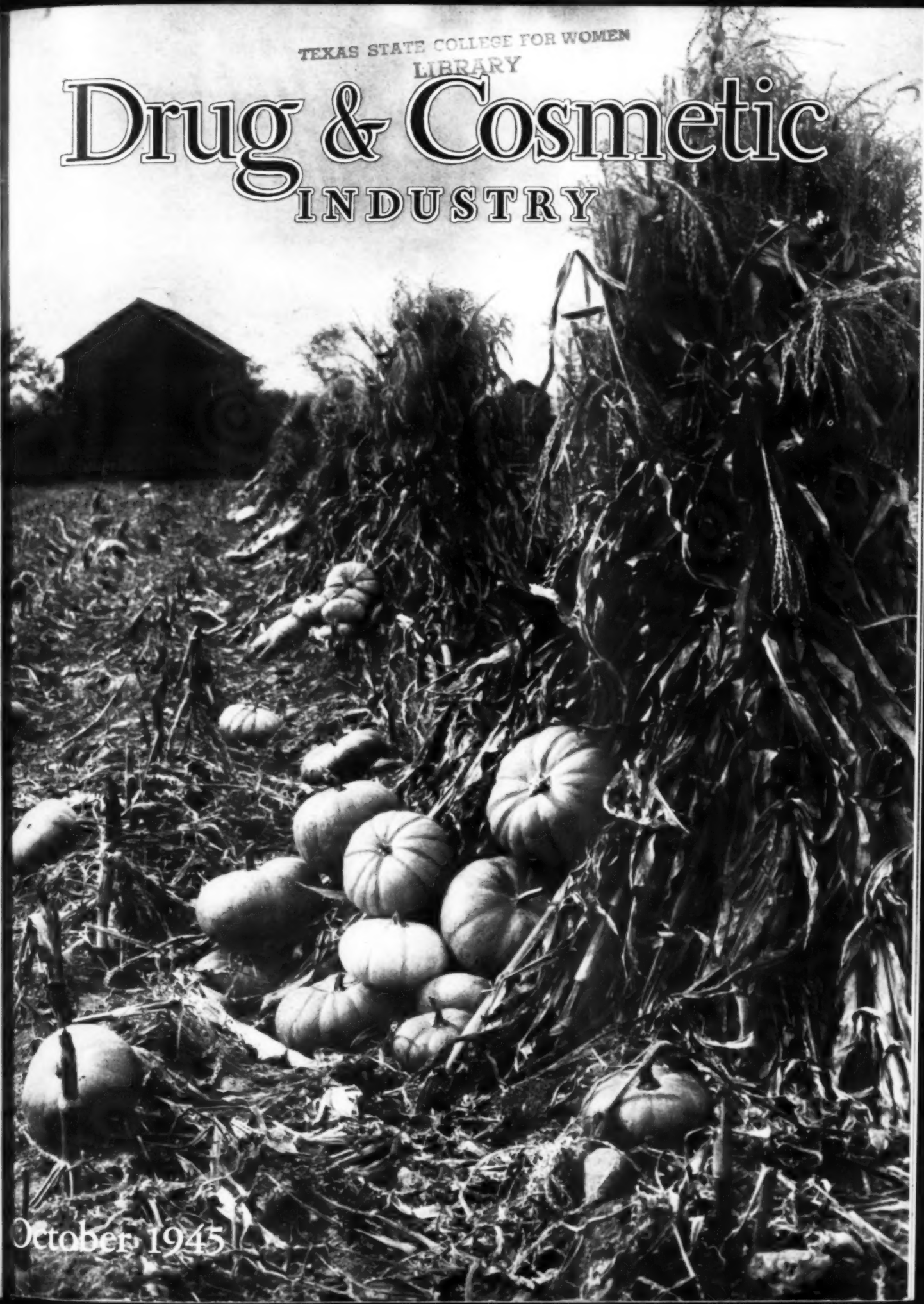
Drug & Cosmetic INDUSTRY



October 1945

What's in free running salt

BESIDES SEASONING

Snow Top Precipitated Calcium Carbonate, the toast of the drug and cosmetic industry!

For the manufacture of salt, Snow Top U.S.P. is used to assure the free-flowing quality, so important since salt-shakers replaced salt cellars.

Drug and cosmetic makers are turning in increasing numbers to Snow Top Precipitated Calcium Carbonate because it makes such an excellent base for their products. In the manufacture of face, body and foot powders, Snow Top is first choice because it bulks high, is highly opaque, is extremely fine and adheres to the skin. In dentifrices it does the work safely and efficiently.

Snow Top is also used in antacid tablets and other edible products because its purity meets Pure Food and Drug Act and U.S.P. requirements. Snow Top is available in the following five grades to provide a wide selection to meet your specifications. Write for your sample today.

SPECIFICATION RANGES FOR SNOW TOP

Grade	Rattle cc.	Flow cc.	2-Hour cc.	Final cc.	Drop Density g/cc.	Drop Density lbs./ft.
Super Light	30–38	40–48	70–90	55–65	.400–0.300	25.0–18.7
Light	20–30	27–40	45–70	40–55	.550–0.475	34.3–29.6
Medium	17–23	19–27	25–45	24–40	.675–0.550	42.1–34.3
Heavy	15–17	15–19	20–25	19–24	.800–0.675	49.9–42.1
Extra Heavy	11–15	11–15	15–20	15–19	.950–0.800	59.3–49.9

Snow Top Precipitated Calcium Carbonate ★ Abietic Acid ★ Nuchar Activated Carbons ★ Liquid Caustic Soda ★ Chlorine ★ ★ Indulin (Lignin) ★ Ligro Crude Tall Oil ★ Indusoil Distilled Tall Oil ★ Tall Oil Pitch ★ Sulphate Wood Turpentine

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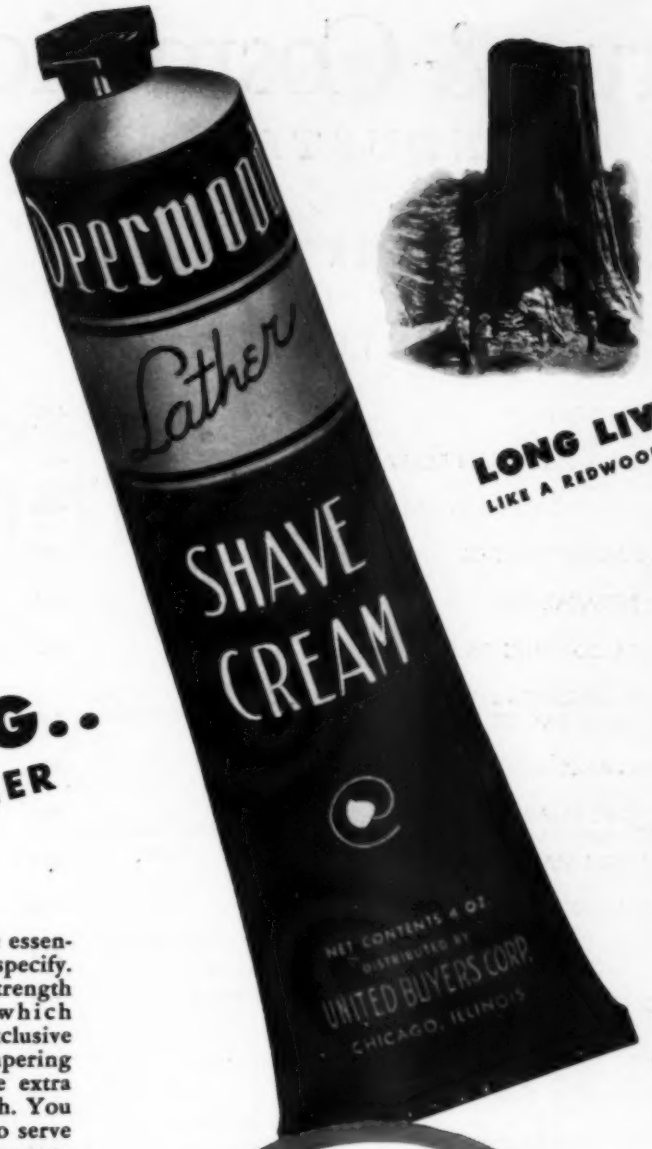
STRONG.. AS A RODEO STEER



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Drug & Cosmetic INDUSTRY

OCTOBER 1945

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Assay $HS-CH_2-COOH$	• 80.0% min.
Dithiodiglycolic Acid	• 2.0% max.
Iron	• 0.0 ppm
Copper	• 0.0 ppm
Ash	• none
Color - A.P.H.A.	• 50 max.
Odor	• faint sulfidic

PHYSICAL PROPERTIES

(PURE COMPOUND)

Boiling Point	• 96° c/5mm
(Uncorrected)	• 108° c/15mm
Melting Point	- 16.5° c
Specific Gravity	• 1.325 @ 20°c
Dissociation Constant	• 2.1×10^{-4}
Normal Oxidation Potential	• 0.27 volts @ 25°c
Heat of Combustion	• 346.3 $K_c$cals/mole

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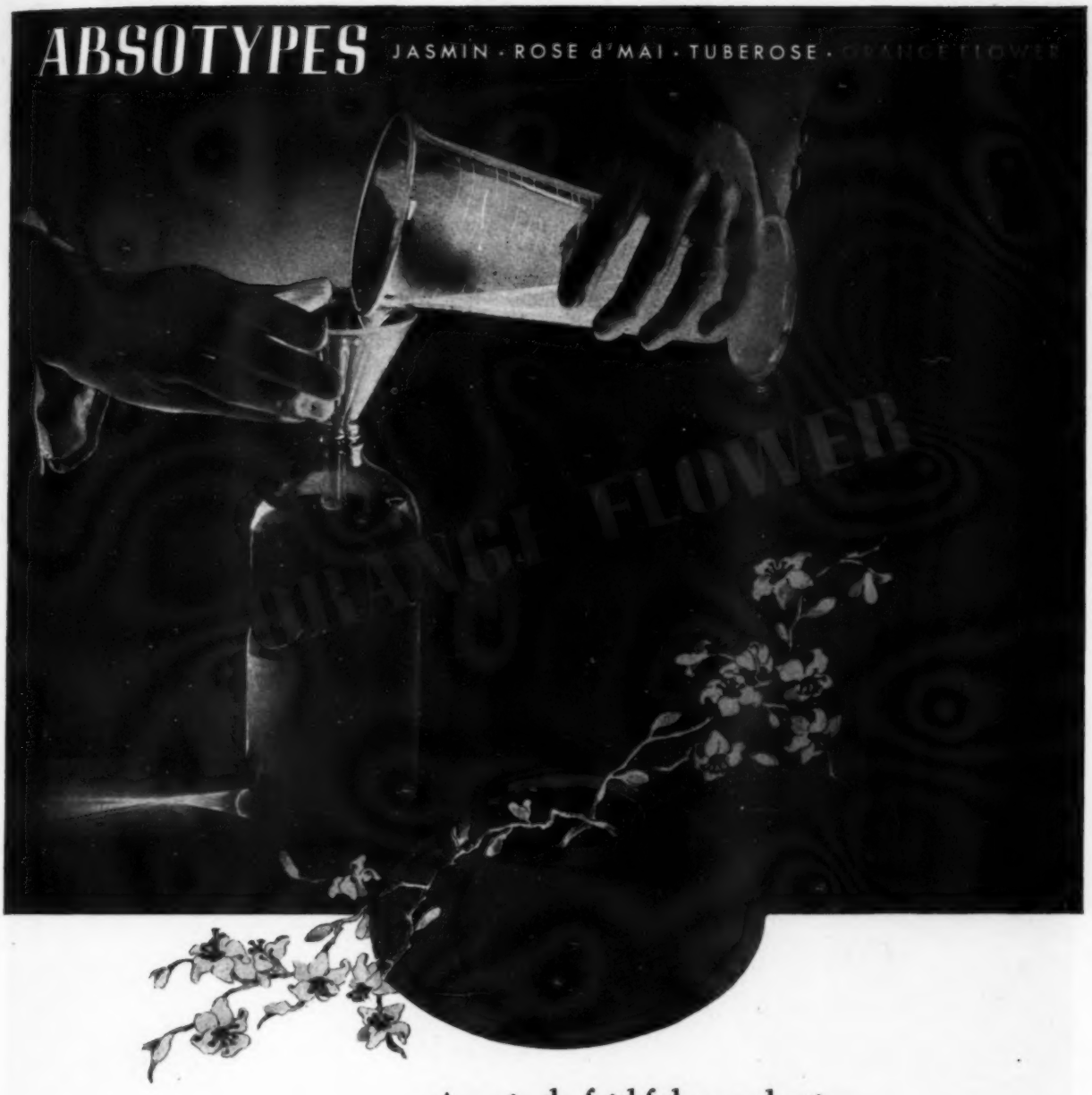

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The unit illustrated consists of two-stage steam jets and a one-stage water jet exhauster. The steam jet exhausters operate in series and discharge into a water jet exhauster which serves both as a condenser for the actuating steam and as the low vacuum stage jet. This exhauster discharges into a specially designed chamber where the non-condensable gases are liberated. The water is re-circulated through the water jet exhauster by means of a small centrifugal pump which is an integral part of the unit. To maintain the required vacuum a small amount of make-up water is continuously added.

These units are available as a water jet vac pump or with 1, 2 or 3 stages of steam jet boosters. Auxiliary equipment such as separators, strainers, pressure regulating valves and superheaters may be included if required. No barometric leg is necessary.

Readily installed, easily operated and requiring practically no maintenance, the compact SK Hydro-Steam Vacuum Unit produces a high vacuum quickly and economically. It is made in six sizes to handle various quantities of gases.

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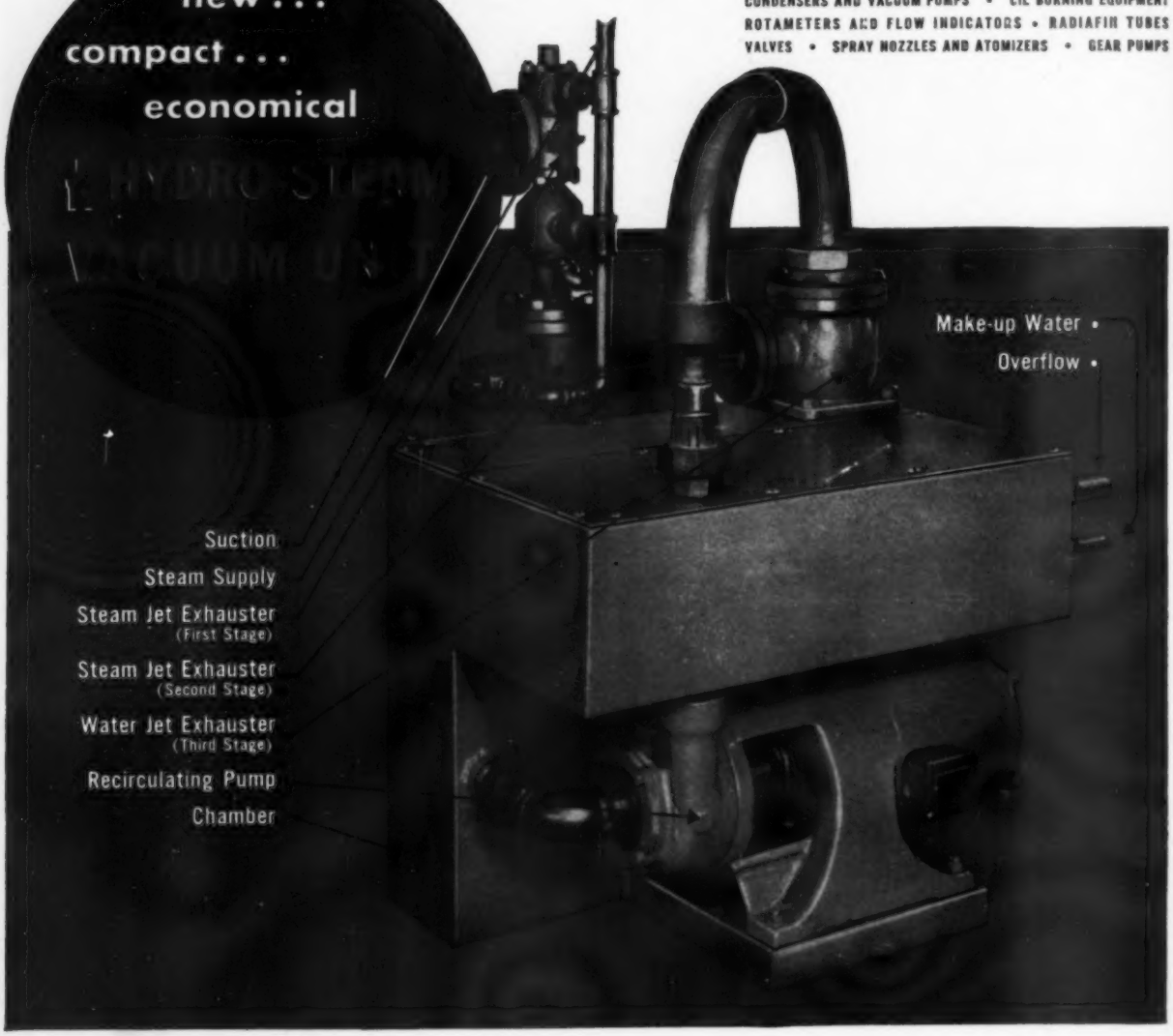

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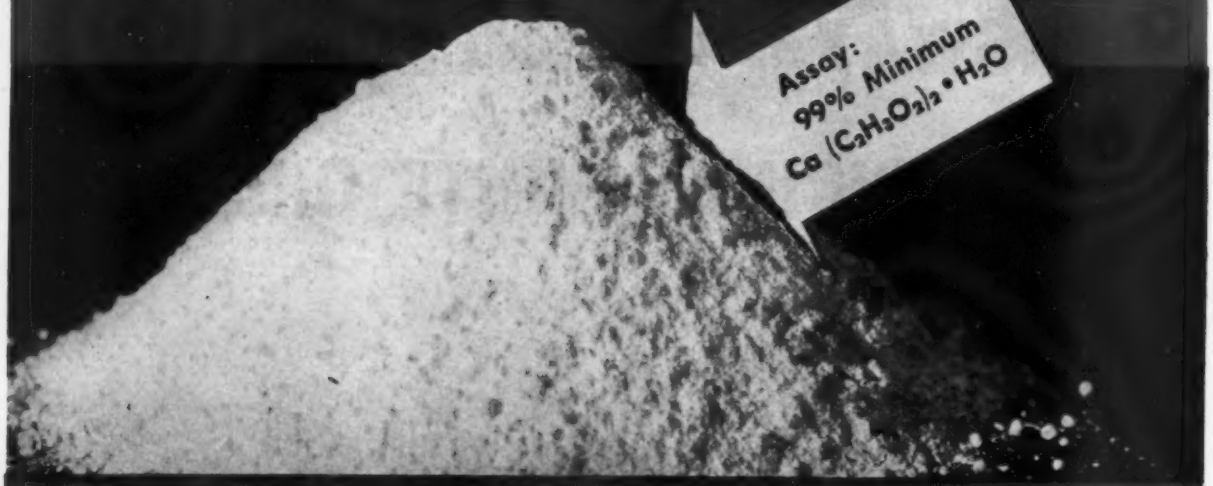

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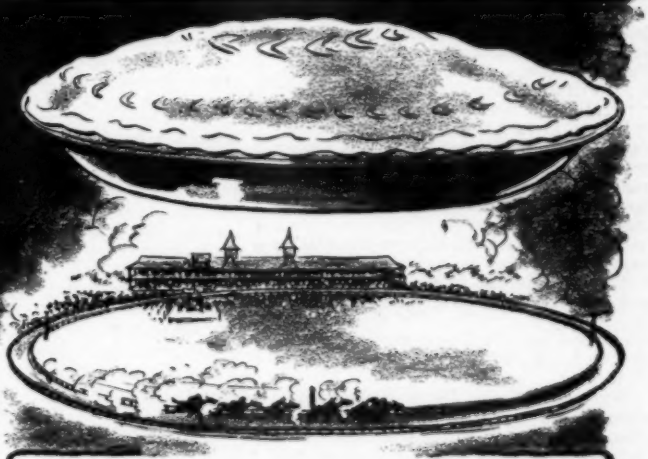

IMAGINE... A PIE OF GREATER CIRCUMFERENCE THAN THE RACE TRACK AT HISTORIC CHURCHILL DOWNS, SITE OF THE KENTUCKY DERBY!

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CERBERUS, THE 3-HEADED DOG OF GREEK MYTHOLOGY, COULD HAVE EATEN 9-LBS. OF FOOD DAILY... FROM 600 B.C. TO THE PRESENT DAY... AND NOT CONSUME THE QUANTITY OF PREPARED DOG FOOD EASILY PACKED IN THE NUMBER OF CARTONS EMPIRE COULD MAKE **IN JUST ONE DAY!**

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INSIDE NEWS

OCTOBER PREPARED BY NATIONAL CAN CORPORATION, NEW YORK, N. Y. 1945

Canned Protective Coatings Save Millions Yearly

With the annual loss of steel due to corrosion estimated at $964,000,000, the protection of metal surfaces cannot be over-emphasized.

To forestall attacks, steel must be completely sealed against all the agencies that seek to destroy it. These principal corrosive agencies are air, moisture, gaseous vapors, soil acids and alkalies, electrolysis, and the action of both fresh and salt water. To prevent destruction from any of these causes, appropriate protective coatings were developed by an Indiana corporation to give maximum protection under all conditions of climate and service.

Upon the efficiency of such protective coatings, the service life and maintenance cost of oil, gas and gasoline lines depend. These lines frequently traverse many different types of soil — going over mountains, under rivers, through forests and swamps. They are subjected to extremes of temperature varying from sub zero to tropical. So the coating must not only be capable of protecting the steel from corrosive agencies, but also must be hard enough to provide satisfactory protection against abrasion.

Then, too, the bond between the coating and the steel must be so strong that there will be no slippage of the coating due to soil stress or other external influence. Enamel is a coating that fulfills all of these requirements and meets the most exacting specifications for protecting oil, gas and gasoline pipe lines.

Where the greatest degree of protection is desired, and conditions permit its application, enamel is recommended. After cleaning thoroughly, the surface to be protected should, when dry, receive an application of cold tar priming solution which serves as a bonding medium. This should be followed by the hot application of a substantial coat of tough enamel produced from coal tar.

The use of primer and enamel in this procedure provides a coating that is impervious to any corrosive agent, a coating so intimately bonded to the steel that it prevents all corrosive agencies from coming in contact with the metal. The coating can be so regulated in its properties that it will withstand temperatures as low as minus 20° F. without flowing or sagging.

For special protective requirements in which certain special conditions exist, other protective coating materials have found wide and successful use.

Among these are cold application paints for storage tanks, structural steel, stacks, towers, metal buildings and other metal constructions —for use on surfaces above or below ground, on or under water. Another protective coating, available in colors, is especially adaptable for pipe protection in sewage disposal plants and water works and is also for use on other metal and concrete surfaces. For painting creosoted wood surfaces such as wood block floors, poles, guard rails and posts, a paint known as creocote is extensively used, while transote, a colorless, odorless and paintable wood preservative is specially prepared for protecting wood against insect attack and decay. There is also an aluminum paint for protecting and improving the appearance of storage tanks, metal buildings, towers, stacks, gutters, radiators, truck and trailer bodies, tractors, and other farm equipment. This aluminum coating deflects the rays of the sun, resulting in substantial heat reduction, not only on the surface but on the inside of tanks or buildings.

Thus the use of paints and other protective coatings saves surfaces of buildings, equipment and materials from destruction that would otherwise run into millions of dollars annually.

The consumer can always be *sure* of the paints and coatings he's going to handle. One reason: They come packaged in tin cans. Products packaged in cans are not affected by sunlight, are protected against air, moisture, breakage and chipping. They are easily handled, stocked and disposed of. When better products are packaged they're packaged in tin cans for *best* protection. 1093

New Bath Saves Citrus Skins

Control of decay of citrus fruits by a method recently discovered had a drawback. The chemical used, sodium ortho-phenylphenate, stopped the decay well enough, but it injured the rinds of the fruit and there was a chance the industry would not gain anything from the discovery. Then, scientists found they could correct the fault by adding formaldehyde to the bath.

The mixture (made up of 37 percent standard formaldehyde and 63 percent of sodium ortho-phenyl-phenate) was applied to the fruits in a warm flood spray or bath.

Tests and retests under actual operating conditions in citrus packing plants convinced the experimenters that the mixture was satisfactory in greatly reducing decay loss and leaving clean attractive skins carrying such extremely small quantities of the mixture that no special washing was necessary. Seeing the economic advantage of this relatively cheap treatment in preventing loss and providing sounder fruit for the consumer, several packers are using it this season. 1094

Repellent Coatings Don't Stick

It is said that repellent coatings have been developed to prevent the backing of adhesive to stick when rolled. 1095

Tough Floor-Resurfacing Material

An asphaltic-base liquid floor resurfacing material has been developed which, when added to a concrete mixture, will bond to concrete, wood or other floor materials. The material is said to be fire-resistant, insulating and vermin- and termite-proof. It can be used either for patching or to provide a complete new surface. It will stand traffic two days after being laid. 1096

Gets the Gallinipper

An ingenious and simple poisoning device that works automatically against certain types of vexatious mosquitoes does so by withholding a deadly dose of DDT until it is needed and then delivers it at the time it will be most effective against newly hatched wigglers. Research efforts have been rushed for protection of the armed forces against insect pests and insect-carried diseases.

The device takes advantage of the fact, established by scientific studies of the life habits of the insects, that mosquitoes of the *Psorophora* group have the habit of laying their eggs in grassy areas that are likely later to be flooded by heavy rains or rising streams and ponds. The eggs mature, and as soon as the land is covered by water, they are ready to hatch almost instantly and soon develop into biting adults. One species is known as the shaggy legged gallinipper; another is the Florida glade mosquito.

Hatching in enormous numbers, these biters may be a terrible pest to troops, farmers, and others working outdoors. Entomologists can inspect an area, locate the egg-infested soil, and predict that trouble will follow. But treating broad areas in the short time between flooding and the biting period has been difficult. The new development permits making preparations in advance of hatching.

The new device is a bottle containing a small quantity of DDT in oil. The bottle is partly buried in the soil in an area where hatching is likely. The bottle has an opening just above ground level. As soon as flood water rises to this opening the oil floats out and spreads a thin, deadly film to kill new hatched wigglers when they come to the surface.

DDT, however, is toxic to fish and other forms of aquatic life. The conditions under which the new device may be used still remain to be worked out. Tests are expected to be made on the device in salt marshes and areas subject to flooding against other species of mosquitoes having egg-laying habits similar to those of the *Psorophora* group. 1097

NATIONAL CAN

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Scientists Develop New Insect Repellents

Development by entomologists of the USDA of new insect repellents, effective against mosquitoes and chiggers, and to a lesser extent against wood ticks, may now be revealed. These repellents, which include dimethyl phthalate, have been used extensively by the allied armies since 1942.

In May 1942 when dimethyl phthalate was tested as a repellent against mosquitoes, it was found to be more effective for preventing bites of the malaria mosquito, than any other compound known at that time. Immediately after it was found to be safe for use on the skin of man, it was made availabe to the armed forces, where it was urgently needed. The information developed served as the basis for such early use of dimethyl phthalate as it was already in production for civilian use for other purposes and could be manufactured with existing equipment. Later, an improved mosquito repellent using dimethyl phthalate as one of the ingredients was developed. It was found that this mixture was more effective for a variety of mosquitoes and biting flies than the pure dimethyl phthalate. This development has enabled the armed forces to issue a single repellent for the protection of personnel against a variety of insects.

In 1942, research workers tested many materials against mites known as "chiggers." It was found that dimethyl phthalate, as a liquid insect repellent, when properly applied to clothing assured that the person using it would be safe from mite or chigger attack. This repellent is applied lightly to the inside of the cuff of trousers and sleeves as well as the buttoned surfaces of the shirt. This barrier prevents chiggers from crossing it and attaching to the skin of man. It kills the ones that are not repelled by it. Dimethyl phthalate has been used extensively and with great success against chiggers by allied military forces in the Pacific theaters. 1098

Still Cloudy

New light is thrown on the problem of clouding in apple juice, but no conclusions are reached by the investigators after a study of at least 60 different packs of apple juice. An anaerobic growth may be, at least in part, responsible. Previous theories have held that clouding was due to pectin.

As for acidity, juices from apples with defects and from small sized fruits had a higher acidity, as was to be expected, but juice from red apples had a higher pH and higher acidity than comparable juice from apples of less red color. Conditions of picking and storing of the fruit, types of defects, and many other conditions affect the resultant juice. 1099

Technical Topics

PATTERNS ON PLYWOOD — Plywood, sensitized by spraying a liquid photo emulsion on it, can receive a photo impression for patterns. This helps effect a great saving in construction time. A prominent aircraft manufacturer is now using this sensitized plywood for cutting templates. 1100

NEW COSMETIC PRODUCTS—Another new product in the making is a synthetic rubber powder puff, claimed to be superior to the present puff. Lipsticks and leg makeup applicators using the foamed latex of synthetic rubber are also proposed. 1101

FISH NETS TO LAST LONGER — The development of a resinous treatment for fish nets at a southern laboratory promises a substantial increase in the life of fish nets when materials are made available. 1102

NEW COMPOUND—A bacteriostatic and fugistatic organo-mercuric compound has been patented for use on paper, textiles and leather. 1103

SEAWEED IN CHEMICAL INDUSTRY, TOO—An extensive, growing industry built around seaweed has developed in the last few years. In addition to textiles similar to rayon, paper like cellophane, and building boards, it is used in products such as food, candy and drugs. An increasing chemical industry is developing with seaweed as the base material. 1104

EXPLODING INSECTICIDE DUST—Explosives for applying insecticide dust have been used in England using a mortar of rolled, cemented paper, enclosing the dust in a paper lining and a powder charge. Parks, forests and orchards can be dusted at moderate cost compared with present methods. 1105

PRODUCES QUININE — Quinine is derived from the bark of *Remigia pedunculata* by heating with diluted sulphuric acid and precipitating with sodium hydroxide. Cupreine is also isolated as a sulphate and methylated to produce quinine. 1106

PHENOTHIAZINE CONTROLS POTATO MOTHS—It is reported that phenothiazine gave the best control of potato moths in Australian tests. The next most effective agents were (1) synthetic cryolite and (2) lead arsenate with sodium-aluminum sulphate. 1107

ORGANIC SOLVENTS—It is announced that organic solvents can have inhibitory influences on bactericides. Acetone, alcohol, diacetone alcohol and glycerin diminish the phenol coefficients of paracresol and thymol. Acetone and diacetone alcohol considerably increase the bactericidal action of phenol, increase that of paracresol slightly, do not affect thymol. 1108

VITAMIN K—A patent has been issued on a process for obtaining vitamin K derivatives having anti-hemorrhagic activity equal to that of the original vitamin. 1109

POWDERS CONTAINING ROTENONE —Activation, oxidation and subsequent degradation of powders containing rotenone are reported greatly accelerated by the addition of minor amounts of inert nonvolatile liquid. Oxidation is greatly decelerated by small amounts of oxalic, phosphoric, sulphamic, or other strong acids. 1110

REDUCES MOUTH-SPRAY INFECTION—It has been discovered that propyleneglycol, vaporized at the rate of 0.5 ml./10^6 ml./hr. by a field apparatus, produced and maintained a 90 percent reduction in mouth-spray infection following simulated sneezing in an unventilated room of 1700 cubic feet capacity. 1111

RETAINS NATURAL ASCORBIC ACID —A process has been discovered for retaining natural ascorbic acid of fruit in citric acid made from citrus fruits. 1112

NEW HYDROSOL—A new hydrosol from Irish moss has been found that combines readily with liquids as a wetting agent, emulsifier, binder or penetrator and which may be used in printing and lithographing inks to increase coverage. 1113

SKIN PREPARATIONS BASES ANALYZED—Analysis of bases for preparations tending to nourish and improve skin health has been announced. 1114

SOAP FOR OIL PRODUCTION—A process using soap in treating oil wells for increased productivity of subterranean oil-bearing strata is announced. 1115

INDUSTRIAL ALCOHOL PROCESS—A continuous-flow process for the production of industrial alcohol is reported. 1116

Every effort will be made to furnish additional information on these articles. Where such information is not obtainable, we will refer inquiries to the original source of the article. Write to National Can Corporation, 110 East 42nd Street, New York City. Please mention the number at end of article — also name of the magazine you saw it in.

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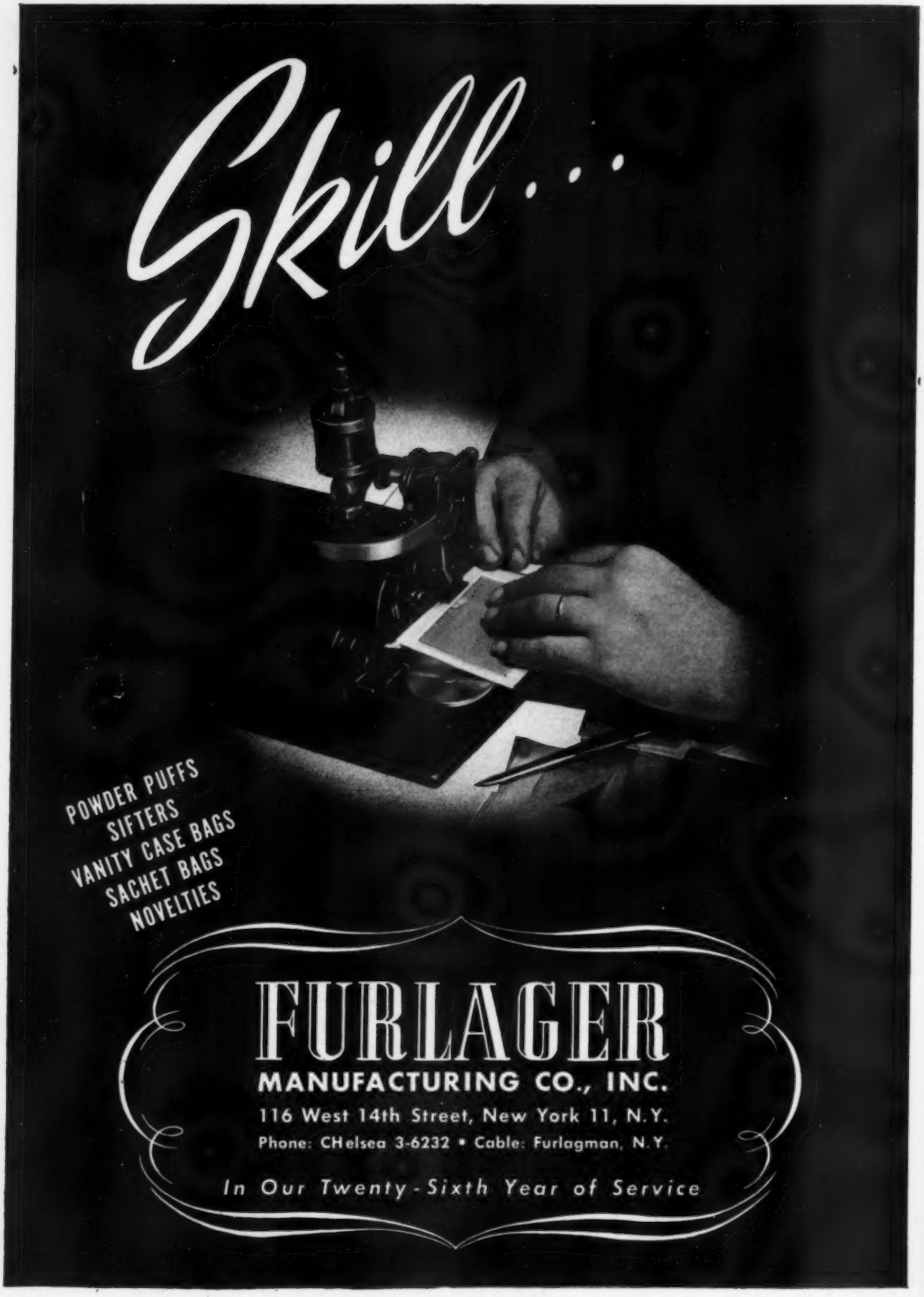
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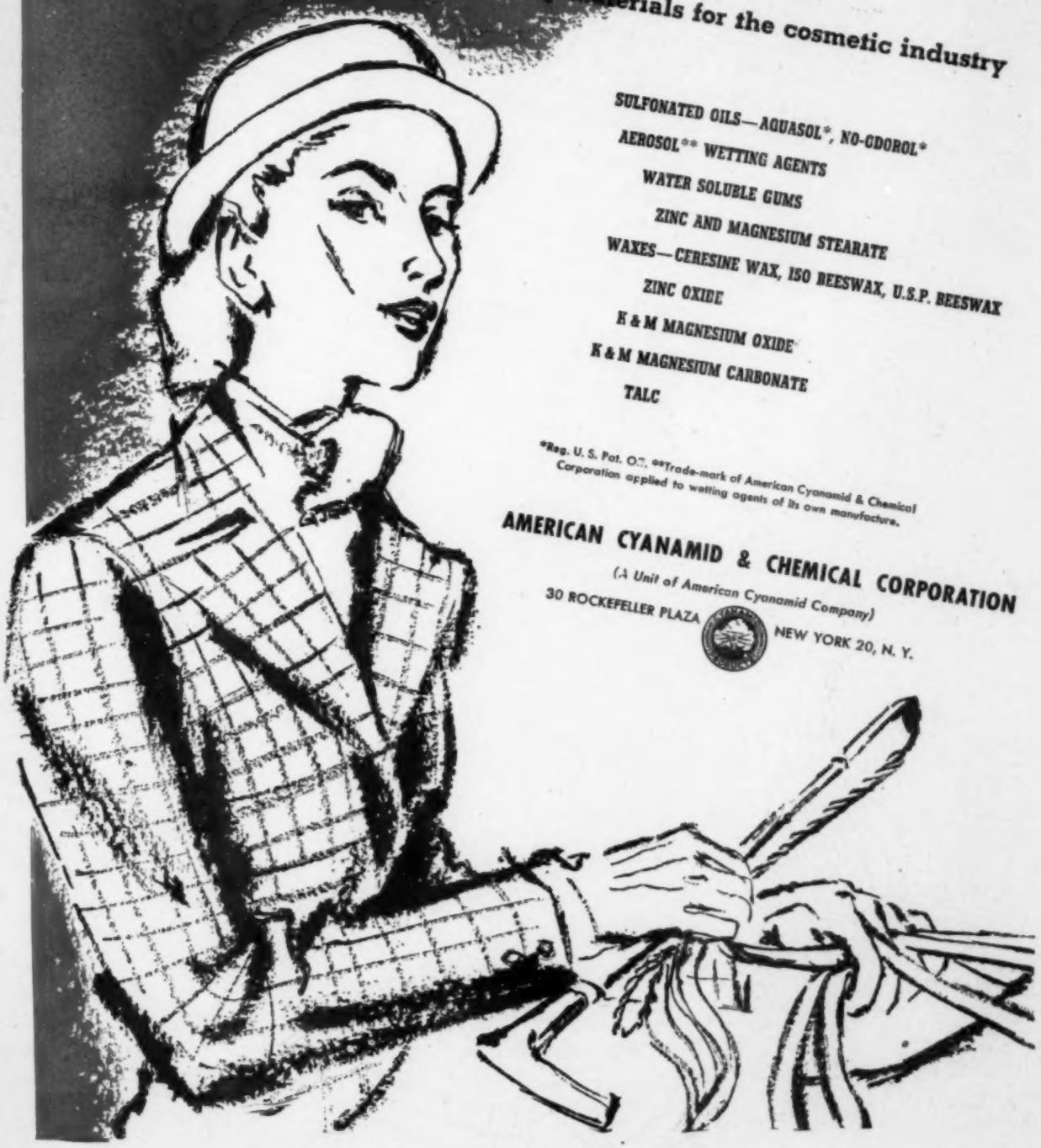
...Cyanamid's controlled quality materials for the cosmetic industry



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K & M MAGNESIUM OXIDE

K & M MAGNESIUM CARBONATE

TALC

*Reg. U. S. Pat. Off. **Trade-mark of American Cyanamid & Chemical Corporation applied to wetting agents of its own manufacture.

AMERICAN CYANAMID & CHEMICAL CORPORATION

(A Unit of American Cyanamid Company)

30 ROCKEFELLER PLAZA NEW YORK 20, N. Y.

To Our Friends in the Perfume, Cosmetic and Soap Industries:

You have understood our problems and borne with us during the dark days when our ability to produce has been restricted and hedged about by all sorts of war-time necessities. For this we convey our sincere appreciation.

Today the picture looks quite different. To be able to again go out and actively solicit business is indeed a pleasure after the last six hectic years.

Practically all restrictions on raw materials of domestic origin have been removed and the balance may have been eliminated by the time this is published. While it may take some time to train our new labor staff as chemical operators, we believe that we will be in nearly full production within the next thirty days.

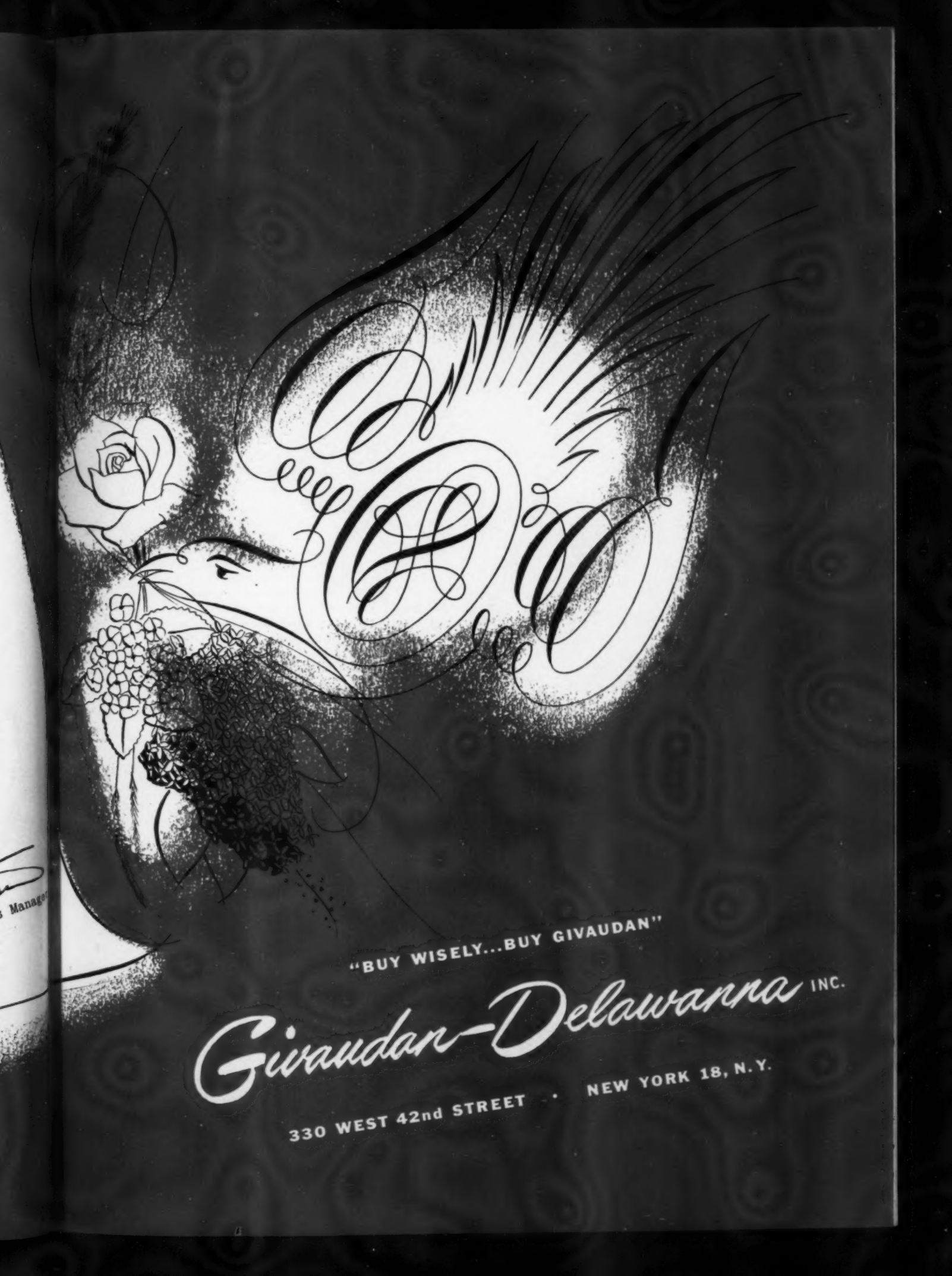
Unfortunately, we will have difficulty for some time in securing adequate supplies of some imported essential oils used as raw materials, principally those originating in the Far East and there is a very marked scarcity of most of the natural flower oils. This situation will adjust itself we hope, as soon as normal commercial relations are established in such countries as Dutch East Indies, Straits Settlements, French Indo-China and China. Reports from France indicate very little hope of an improvement in the flower oil situation until the 1946 crop is available.

We look forward with pleasurable anticipation in our ability to serve you as we have in pre-war days, with the additional experience we have acquired and the new products and developments which have come out of our Research and Service Laboratories.

Sincerely,

GIVAUDAN-DELAWANNA, INC.

Sales Manager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from Mold...

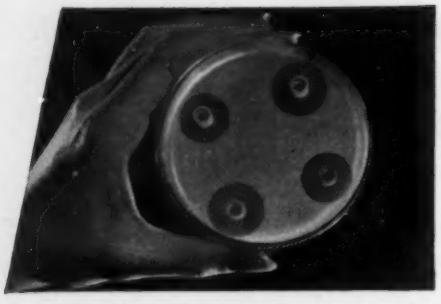
The "miracles" achieved by Penicillin are monuments to the genius of Dr. Alexander Fleming, Professor H. W. Florey and other scientists, both American and British, who collaborated in its development.

But the now almost universal availability of Penicillin is a monument too — to the industrial scientists of the United States. To them goes the credit for today's large scale production methods which have placed at the disposal of physicians, surgeons, dentists and veterinarians upward of eight hundred billion units per month.

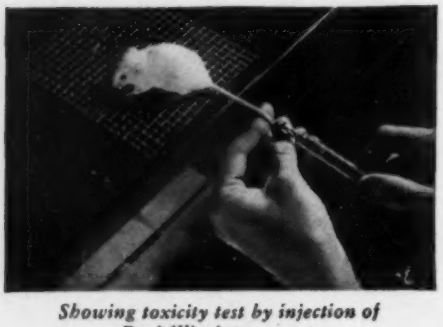
Heyden is proud to be in the front ranks of those who are producing this "miracle working" drug from the lowly mold.

Sodium and Calcium Penicillin Heyden, in vials of 100,000 and 200,000 units, with eighteen months expiration date, for human and veterinary purposes, are available through distributors in the United States selling under their own labels.

For research and compounding, Penicillin Heyden, in both vials and bulk, is sold directly to the user.



Showing culture dishes and bacteria growth



Showing toxicity test by injection of Penicillin into mouse

to Miracle!

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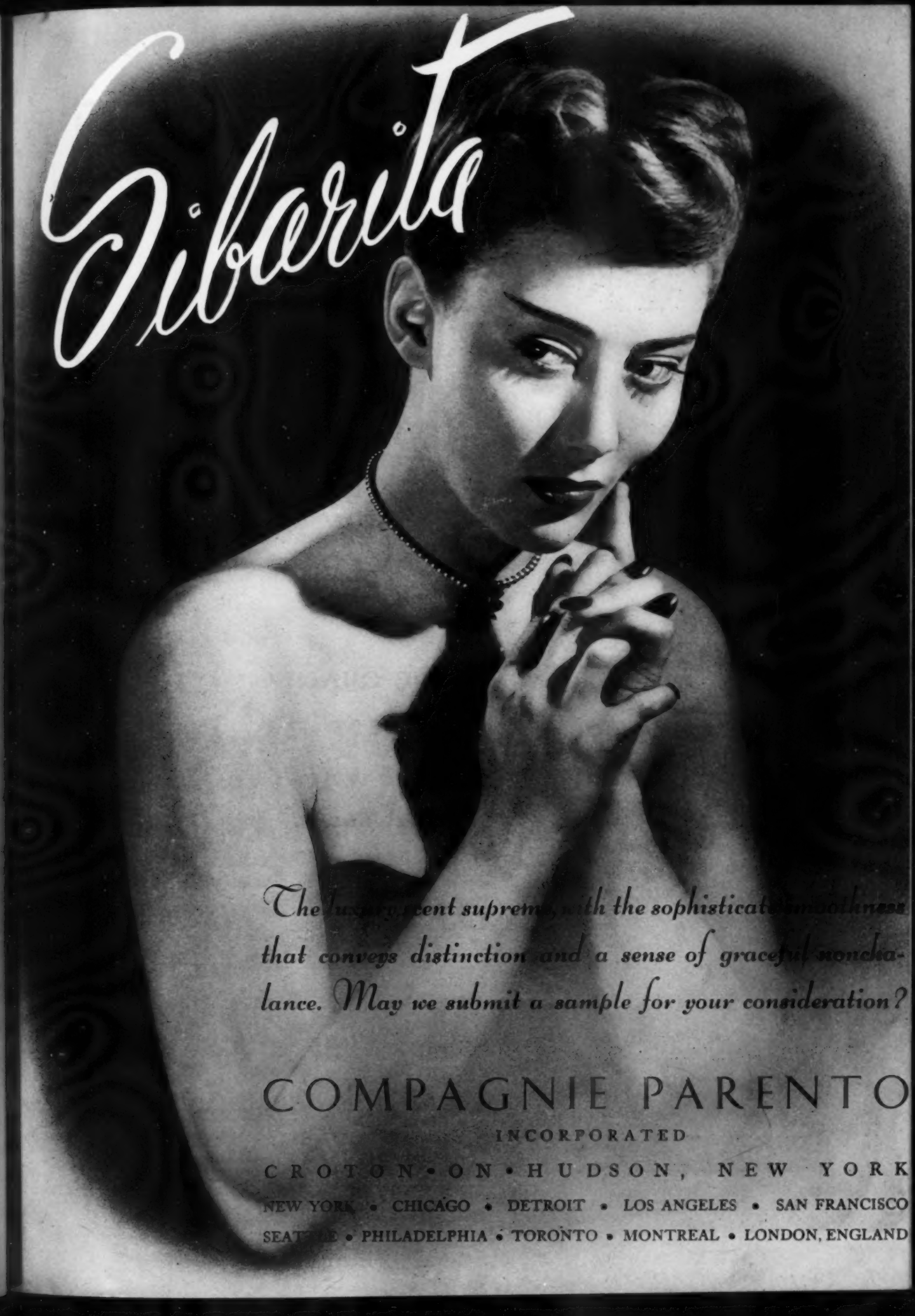
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The luxury scent supreme, with the sophisticated smoothness that conveys distinction and a sense of graceful nonchalance. May we submit a sample for your consideration?
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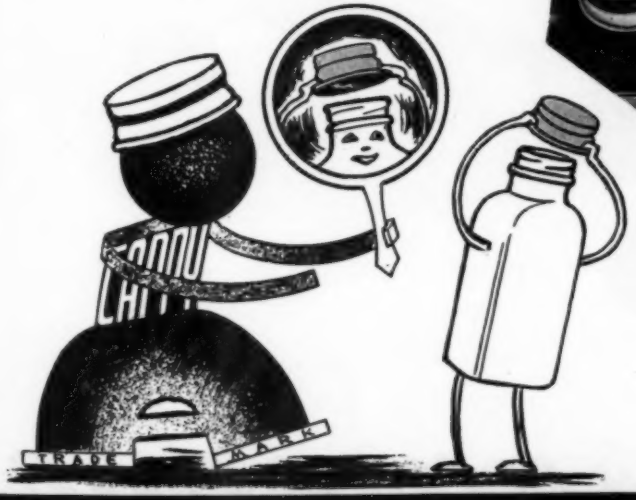
For greater shelf appeal, let **ARIDOR** suggest how to lend an air of true distinction to *your* package.



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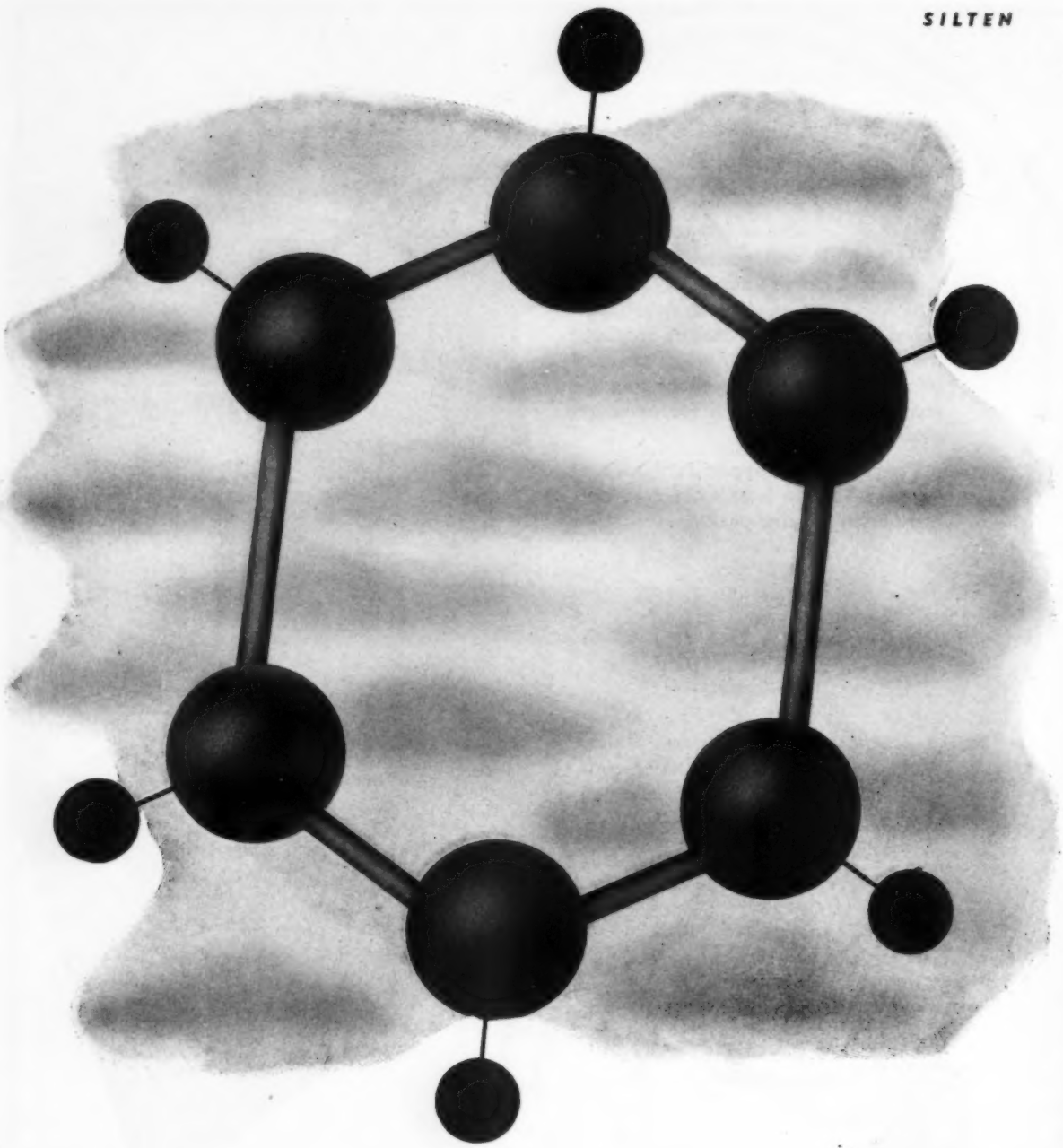

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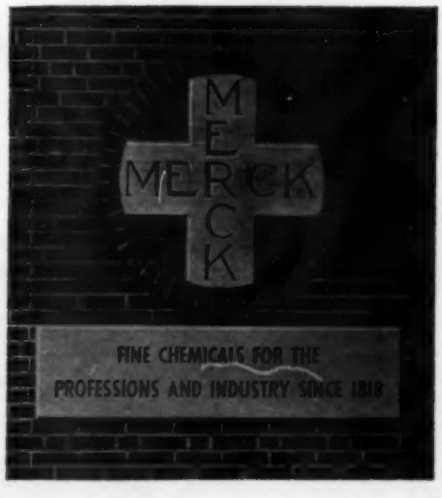
BUTOBEN (*n*-Butyl Parahydroxybenzoate Merck), an antiputrefactive and antifermentive agent, is an effective, nontoxic preservative in various preparations.

BUTOBEN can be used in acid and neutral products, as well as in moderately alkaline media. It is economical because of the small quantity required (2-100 of 1%), *i.e.,* only 1 ounce is required to preserve 35 gallons of a preparation. Suggested uses are in gum solutions for hairwave setting, and various types of liquid preparations, including face and hand lotions, cosmetic creams, medicinal elixirs, tonics, certain eye lotions, and emulsions.

BUTOBEN, while an excellent preservative for the aqueous phase of cosmetics, does not prevent rancidity of oils and fats, as this is not caused by micro-organisms, but by hydrolysis and subsequent oxidation, and for which purpose an antioxidant is required.

As many cosmetic and medicinal preparations are composed of several ingredients, some of which may be incompatible with certain preservatives, we suggest that you consult the Merck Chemical Service Department regarding your manufacturing problems and requirements.

Samples of BUTOBEN and literature will be supplied to manufacturers on request.



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WASHINGTON 25, D. C.

7 September 1945

Mr. Irving McKesson, President
New York Quinine & Chemical Works, Incorporated
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Brooklyn, New York

My dear Mr. McKesson:

Your company has played a very important part in producing the equipment and supplies which have been such a decisive factor in winning the war. You and your associates and employees must have a deep sense of satisfaction as you look back upon your accomplishments on the war production front.

Now that the war is won, I want to express to you the gratitude and appreciation of the Army Service Forces for the magnificent achievements of your organization.

The energy, initiative, and efficiency which industrial concerns like yours have demonstrated in the war effort give me complete confidence that the problems of transition to normal peacetime production will be met with the same effectiveness as those of war time and will be as swiftly and as successfully solved.

With all good wishes for the future, I remain

Very sincerely yours

BREHON SOMERVELL
General, Commanding

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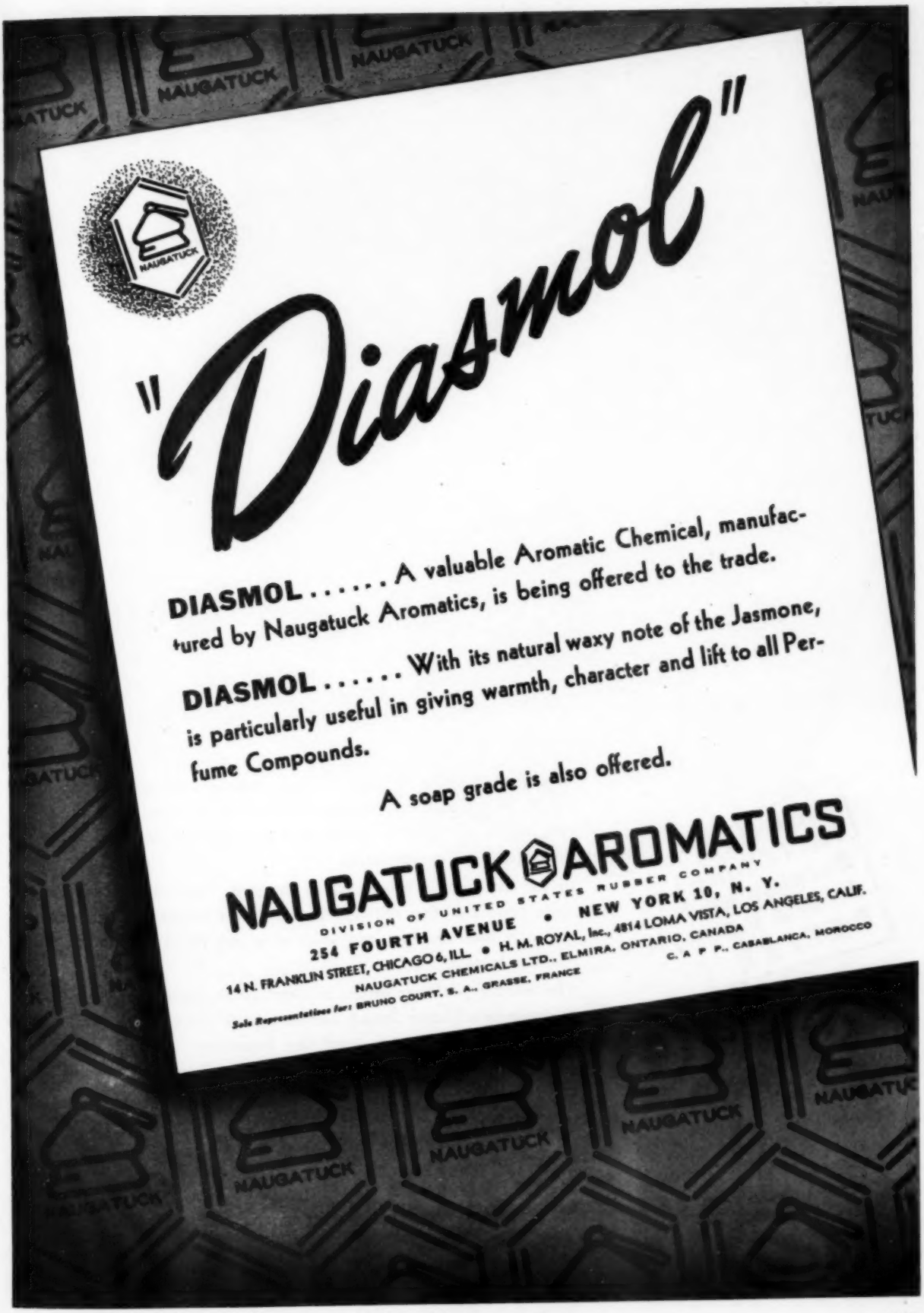
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DIASMOL . . . . . With its natural waxy note of the Jasmone, is particularly useful in giving warmth, character and lift to all Perfume Compounds.
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There have to be sound reasons for *Durlin's* world wide reputation as the foremost name in bulk *Nail Enamel.* Much better reasons than a superior uniform product, a proven reputation for alertness in research, a modern factory manned by personnel experienced in nail lacquer production.

Durlin's reputation lies in a customer service that has paid big dividends to the many users of their *Nail Enamel. Durlin* color sense, shown by an early awareness of fashion trends, selection of colors and aid in packaging has many times helped customers to that "extra edge" which brings success.

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In this mood and in this period, D & O was founded to serve the needs of the drug sundries industry, including perfumes and cosmetics, a veritable infant. But the lusty infant grew and D & O with its research and compounding laboratories grew apace...and both flourished.

Today the priceless heritage of experience and knowledge accumulated throughout the years enables D & O to anticipate trends, to meet new conditions and to solve new problems.

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Let D & O solve your perfuming problems.

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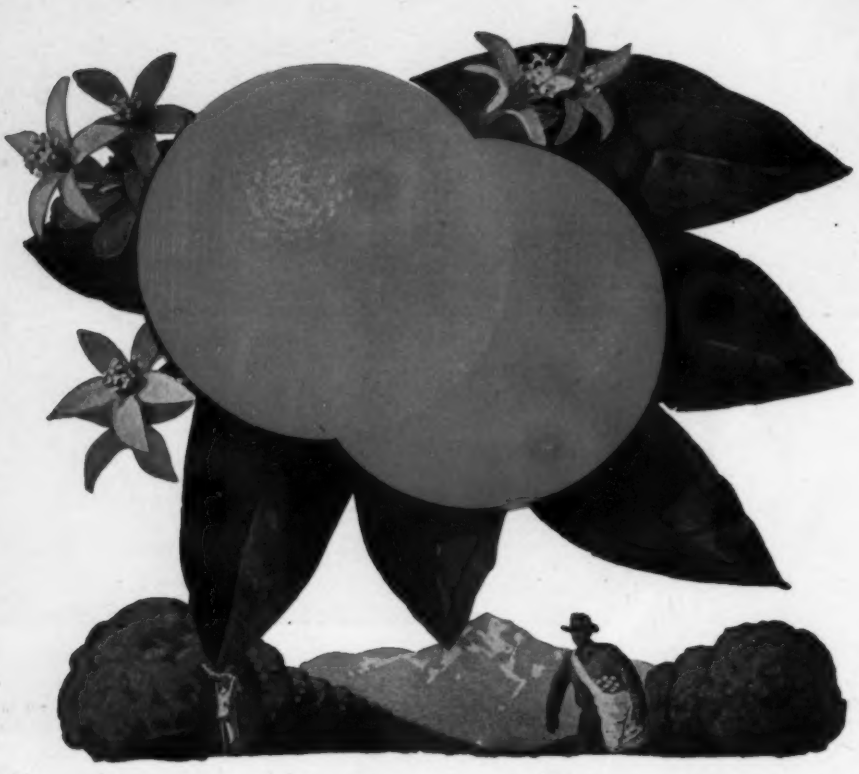
Plant and Laboratories: Bayonne, N. J.



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First in America for Orange Flavor

Give it all your tests for *quality, uniformity,* and *strength.* The results speak for themselves! You'll find Exchange Oil of Orange puts more *real orange flavor* in your products than any other orange oil.

Because it's made only of fruit from the "Sunkist" groves of California... in the largest orange products plant in the world... accepted and reordered by men and women who know orange flavor.

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OIL OF
ORANGE
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REMEMBER the PA . . . *the *Purchasing Agent*? His day is coming back. The honeymoon of the seller's market will be over soon.

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When that day comes *(and the sooner the better)* the PA will be right back in the saddle again, demanding quality as well as quantity, demanding full value, demanding service with a capital S for swift.

Thanks to America's PA's from MM&R

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But most of the time, if the real McCoy wasn't available, there was a solution—an excellent MM&R Replacement Oil, or a suggestion that helped a harried PA out of a dilemma.

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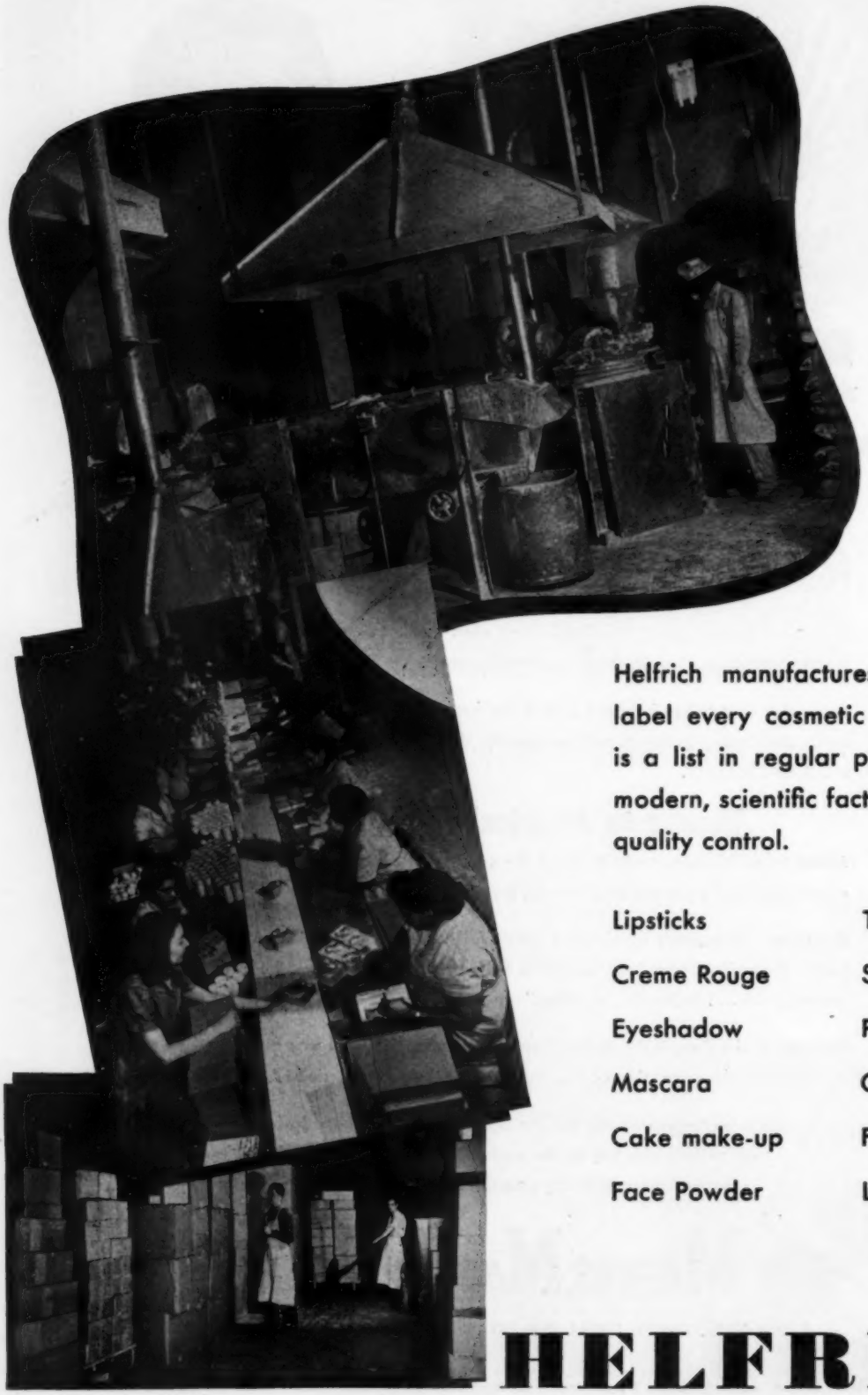
A Great Name in Cosmetics



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Helfrich manufactures under private label every cosmetic product. Below is a list in regular production in our modern, scientific factories under rigid quality control.

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Face Powder	Lotions

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Headquarters for one or a complete line of time tested private label cosmetics. Helfrich is one of the oldest names in private label.

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Test Ethavan in your laboratory . . . use it in a trial run of your product. See if you do not find it to be effective . . . and *economical.*

Ethavan, made by Monsanto, already is widely used in blending favorite bouquets. It is so high in purity that it may be used in even the whitest soaps . . . so uniform in quality that you can depend upon results — *always.* And, since it has approximately three times the strength of vanillin you use less. It is economical.

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FLAVOR MANUFACTURERS
find Methyl Anthranilate Extra indispensable in the preparation of artificial grape flavor.

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COSTLY INGREDIENTS?

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Flavor solvent . . . mold inhibitor . . . moistening agent . . . Dow Propylene Glycol is all of these things. Because it handles so many different jobs well, it's helping to simplify many processing operations. And Dow Propylene Glycol meets National Formulary standards of purity . . . is suitable for use in products to be taken internally.

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CHEMICALS
INDISPENSABLE TO INDUSTRY

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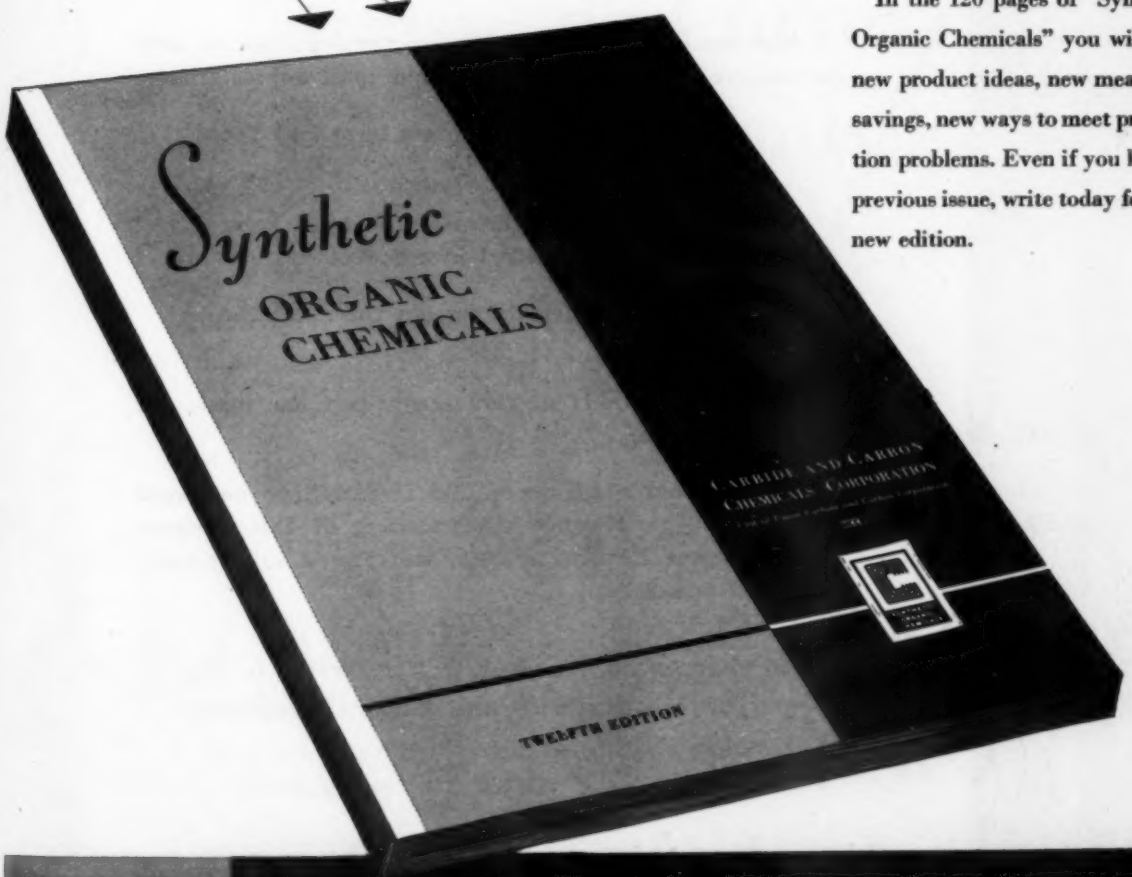

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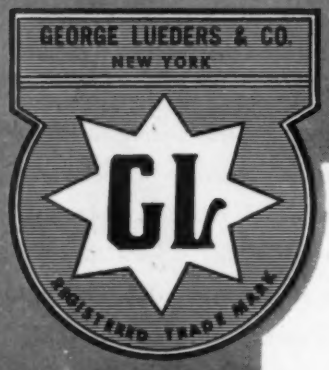

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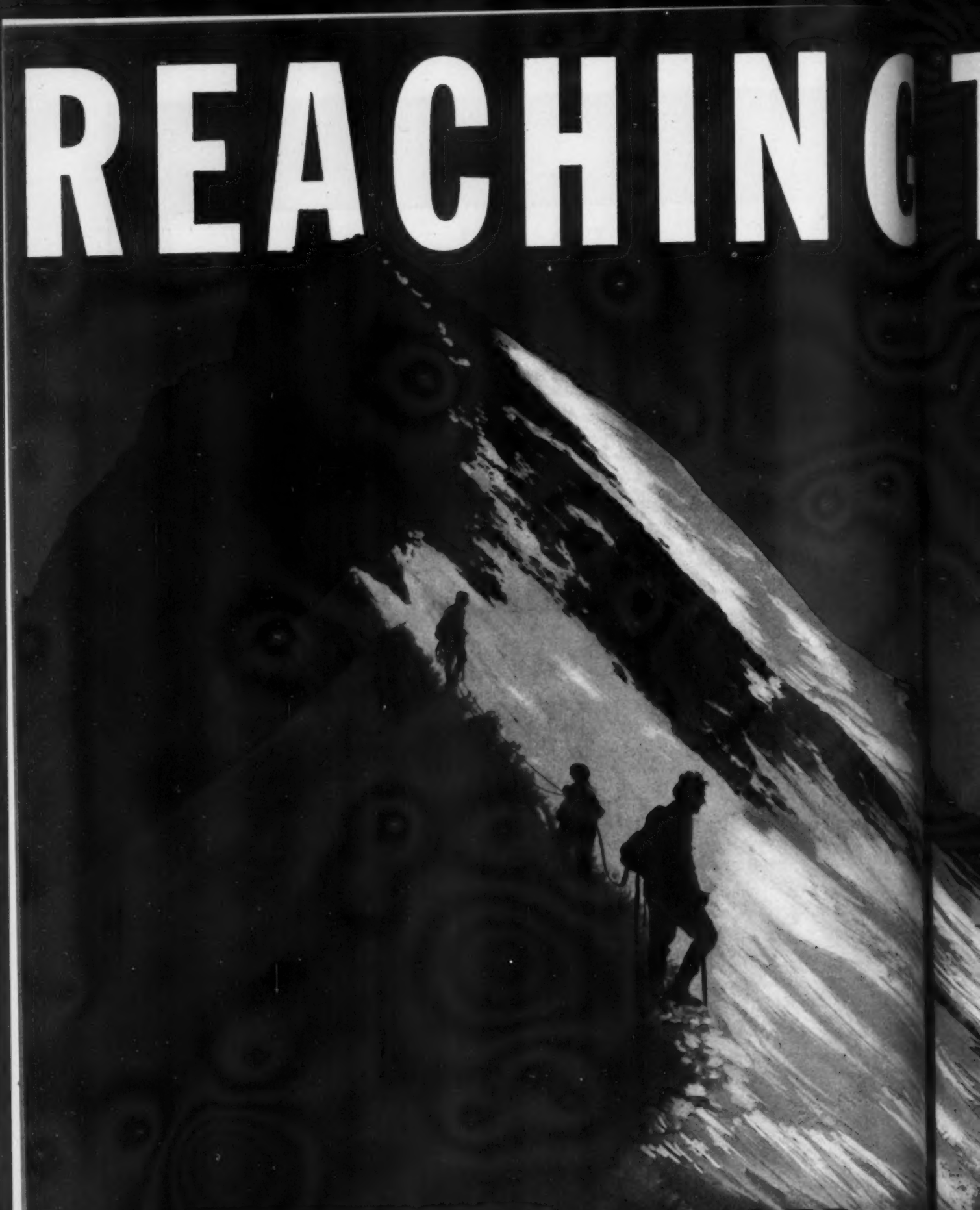

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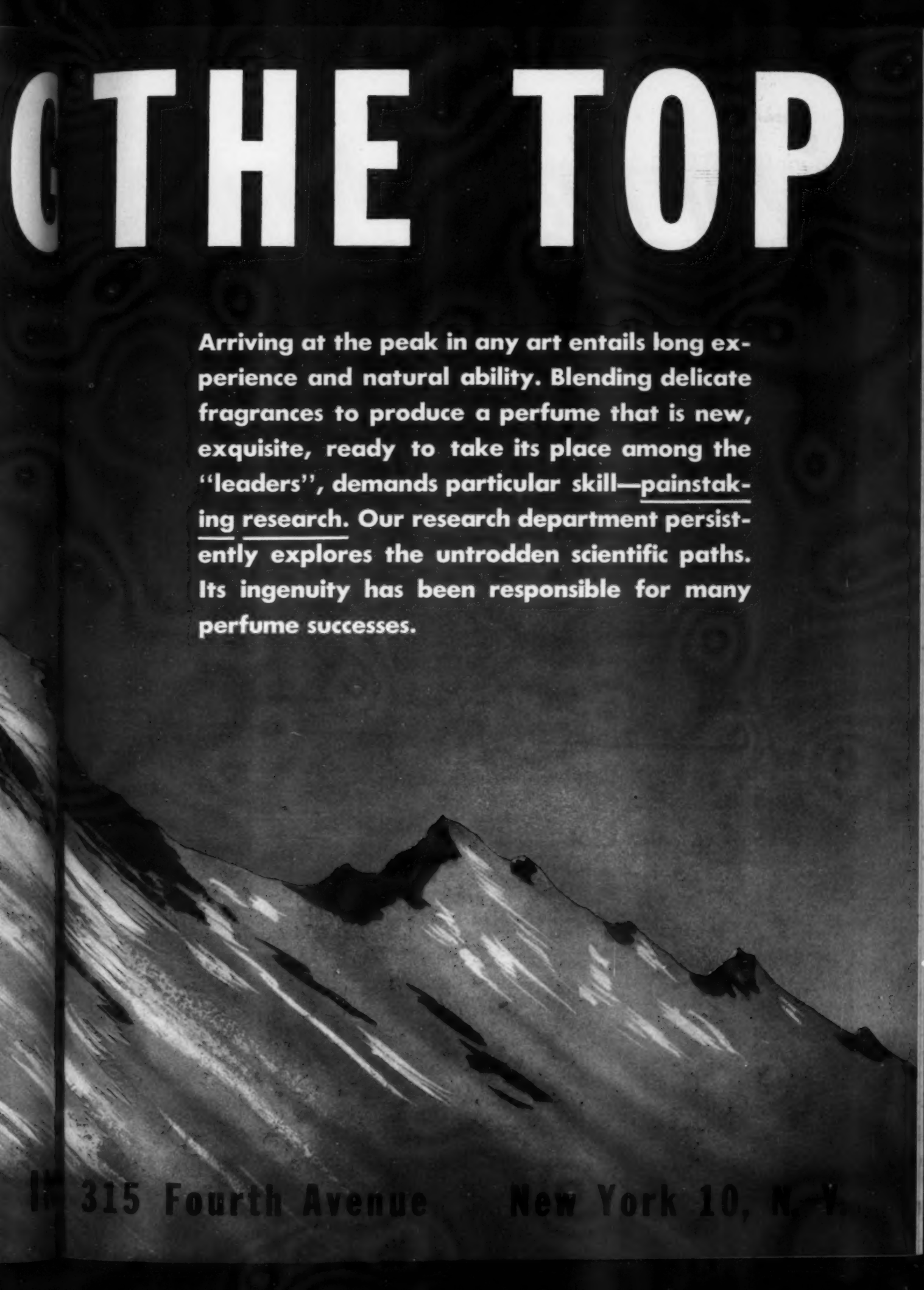

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HIGHLIGHTS FROM THE OCTOBER ISSUE

American Druggist

THE BUSINESS MAGAZINE OF EDITORIAL VITALITY

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Males Go For Cosmetics

The biggest boom after the last war was in sales of wrist watches. After this war it will be in the sale of men's toiletries. To help the retail druggist, this issue contains a four-page feature on this important drug store department.

The Brands Doctors Favor

Many interesting trends in professional pharmacy were uncovered in a recent survey of 6,000 prescriptions made in Louisville, Kentucky, at the request of American Druggist. It will give manufacturers and agencies concerned with the professional aspects of pharmacy some new information as to popularity of various types and brands of ethical items.

Floor Facts For Pharmacists

Aware that the retail druggist's major interest today is in new store equipment, this issue contains a comprehensive analysis of all the types of floor coverings available to the retail druggist.

Full Employment and the Corner Druggist

What affects the nation affects the corner druggist. The Full Employment Bill now under discussion in Congress will be one of the keystones in our postwar economy. It is another article that expresses our editorial policy of keeping the druggist alert to national and neighborhood conditions that have a strong bearing on his own drug store operation.

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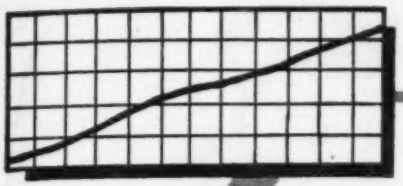

When chemicals are scarce, the quality of the chemicals that are available assumes a greater importance. With Hooker, high quality is a constant, not subject to variations in accordance with supply.

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A few of the Hooker chemicals are listed below. More comprehensive information and samples are available when requested on your letterhead. Send also for the 1945 edition of Hooker General Products List. It gives brief, pertinent information on all Hooker Chemicals.

Product (Chemical Formula Molecular Weight)	*Description*	*Uses*
Aluminum Chloride, Anhydrous $AlCl_3$; 133.3	Gray crystalline solid.	Catalyst in organic synthesis; pharmaceuticals.
Antimony Trichloride, Anhydrous $SbCl_3$; 228.1	Yellowish solid.	Catalyst in organic synthesis; in manufacture of dyes and pharmaceuticals.
Benzoate of Soda—USP C_6H_5COONa; 144.0	White, odorless crystalline solid in flake or powdered form.	Antiseptic in pharmaceutical and medicinal preparations, in tooth pastes and powders.
Benzoic Acid—USP C_6H_5COOH; 122.1	White, odorless crystalline solid in powdered form.	Ingredient of cosmetic creams, lotions and other pharmaceutical preparations; antiseptics, dentifrices, dyestuff intermediates. Manufacture perfumes and pharmaceuticals.
Benzoyl Chloride (Benzenecarbonyl Chloride) C_6H_5COCl; 140.5	Water clear liquid, soluble in ether, reacts with alcohol and water.	Highly active source of benzoyl group. Manufacture of benzophenone, benzyl benzoates, dyes and pharmaceuticals.
Metanitrobenzoyl Chloride $C_6H_4NO_2COCl$; 185.5	Yellow to brownish liquid, partially crystallized.	Manufacture of pharmaceuticals.
Paranitrobenzoyl Chloride $C_6H_4NO_2COCl$; 185.5	Yellow crystalline lump material.	Manufacture of novocaine; dyes.
Sulfuryl Chloride SO_2Cl_2; 135.0	Light yellow liquid.	Chlorinating agent. Forms chlorides and anhydrides of organic acids.
Thionyl Chloride Refined and Technical $SOCl_2$; 119	Colorless to yellow or pale red liquid.	Chlorinating agent. Forms organic acid chlorides.

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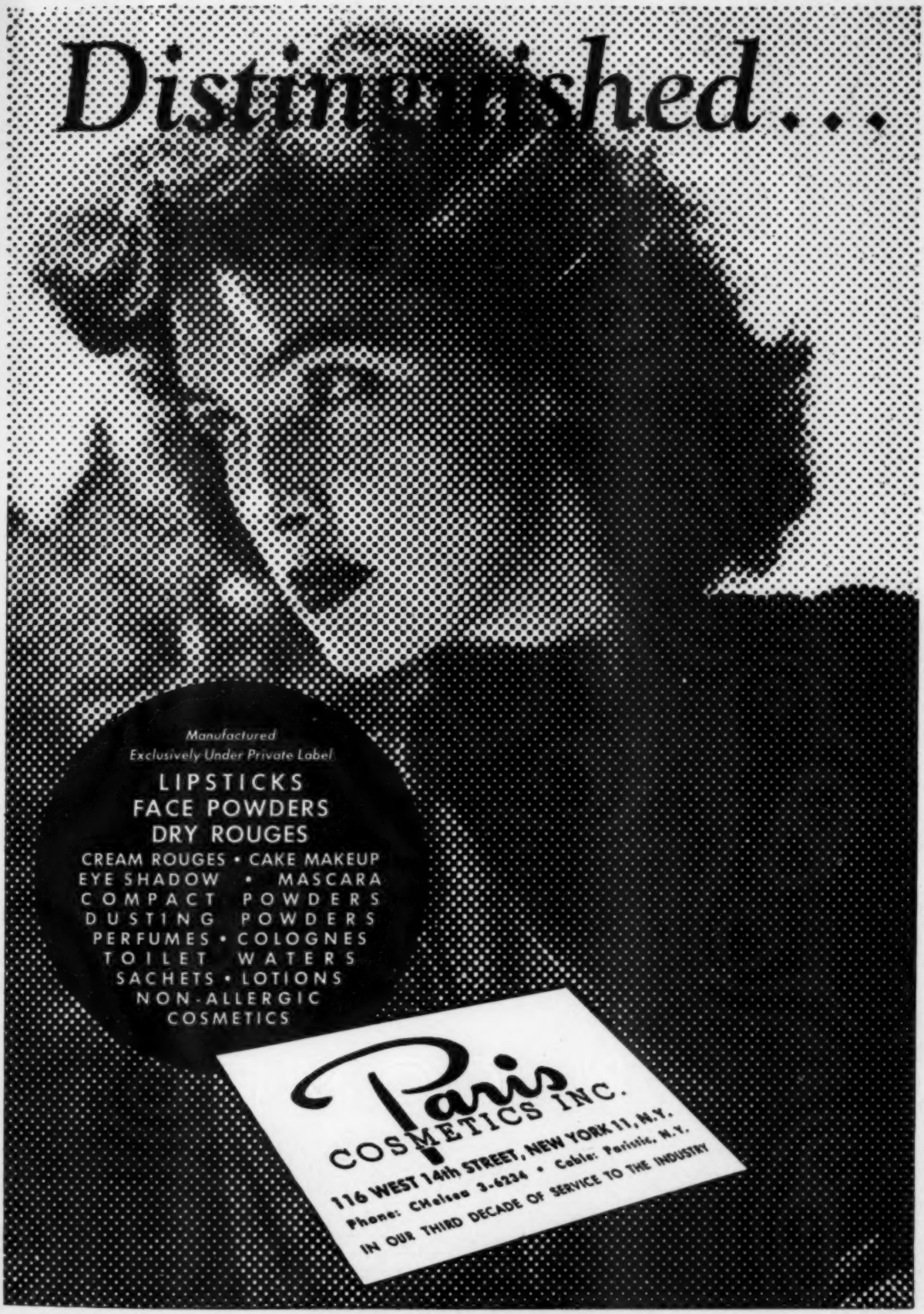
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BACK AT OUR NORMAL JOB

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The entry of the United States into the first World War found this country ill-equipped, technically as well as physically, to meet its needs for chemicals: the American organic chemical industry was still in its swaddling clothes. Such simple, yet vital, chemicals as Benzyl Chloride and Benzyl Cyanide, required for training the troops in chemical warfare; and Benzyl Benzoate and Benzyl Acetate, needed in dope for protecting the wings of airplanes, were made on a limited scale by ourselves and a few other small chemical companies. However, we and these other companies successfully met the Government's requirements for the urgently needed chemicals.

During the second World War, we supplied the Government with Dibutylphthalate, used as a plasticizer in smokeless powder; and with Dimethylphthalate, used as an insect repellent. We supplied our sunscreen Escalol 106, the superiority of which was established by Army field tests. And we again supplied Benzyl Benzoate, but for another purpose than that for which this chemical was used during the first World War: research chemists had found this indispensable perfumery, drug, and pharmaceutical substance to be the most effective repellent and killer of the scrub typhus mite, one of the most insidious and dangerous of the many insect pests menacing the health of the armed forces in the South Pacific. Among the many products developed by our research laboratories were emulsifiers for Benzyl Benzoate, DDT, and other insecticides.

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COURTESY MERCK REVIEW

"Gentlemen, in order to absorb the shock of our reconversion from Penicillin back to Potash, I propose we institute an intermediate cushioning program of synthetic rubber."

KEEPING POSTED

Sales Problems Still Ahead

THERE are very few manufacturers in this industry who are not concerned about the future of their sales volume as compared with the war years. However, they are still having trouble obtaining sufficient labor to produce all the goods that they can sell and consequently, at the present, they are still concerned to a greater extent about production than they are about sales. Manufacturers will not begin to worry about sales until such time as they have sufficient production to eliminate all back orders and have a large surplus of all types of goods in stock. Not only is labor a difficulty, but, despite the lifting of all kinds of restrictions on raw materials and packaging materials, these raw materials and packaging materials are not yet in free supply because of sudden demands and also because of labor difficulties in these supply industries. It will probably be some little time before the supply of all raw materials and other things necessary to produce the products of this industry are in abundant supply, and until that time, sales departments of drug and cosmetic manufacturers will not have to worry about maintaining their sales volumes.

Alcoholism and Its Effects

OF THOSE people who die from cirrhosis of the liver, or "hobnails on the liver," the Journal of the AMA reports that only 35 per cent are inebriates, the other 65 per cent being noninebriates. Also a study of 198 inebriates with cirrhosis failed to demonstrate any beneficial effect of high carbohydrate diets or of vitamin B_1 on the course of the cirrhosis. However, the Research Council on Problems of Alcohol is going to study along the following lines:

"First, the committee will suggest problems and plans for research on the cause or causes (biologic and social) of alcoholism in man. The committee will include the study of effects of alcohol on various organs, functional processes and capacities. The second aspect of the program provides for the establishment in hospitals of medical schools of one or more research centers with facilities for diagnosis and treatment. Through such studies it may be possible in time to recognize early in life, especially in adolescents, the organism personality with subnormal resistance to alcohol in the hope of providing an effective method of preventing alcoholism."

Penicillin and the German I. G.

IN A REPORT on the pharmaceutical activities of I. G. Farbenindustrie given by four American scientists who investigated the situation in Germany after the surrender, some interesting facts are revealed. Outstanding is the following statement regarding penicillin:

"Work had been done at both the Elberfeld and Hochst plants. . . . At Elberfeld only slight success was attained and only very small amounts of substance were produced. At Hochst, enough material was produced so that the penicillin could be used clinically. Here also, the yields of penicillin in the broth were very small and processing losses high. Very little, if any, work was done on submerged fermentation. Surface material was made in amounts not over 10 million units per month, and it is doubtful if more than 50 million units were made in all.

"At Hochst, using the Capek-Dox medium with yeast or potato water added as a supplementary substance, surface fermentation gave yields in the broth of about 10 o.u./cc. . . . . calcium penicillin was prepared having an activity of about 125 o.u./cc. The yield from the broth to the calcium salt was about 50 per cent.

"No information regarding the structure or empirical formula was known. It is obvious that no exact information could be gained from 125 unit material.

"Physico-chemical work has been carried out at Hochst on the calcium penicillin obtained there. Due to the low potency (125 o.u./cc.), no significant results were obtained.

"So far as we were able to learn, no significant production of penicillin was going on at any other place in Germany and no German scientist had any information regarding synthesis or structure other than was published in the literature."

We can all thank God that in this country we have the drug and chemical manufacturing industries that can produce the things that we need in time of danger whether these things have ever been produced before or not.

Peeking at the Atomic Age

THE atomic bomb is going to increase the problems of sales departments no end, if the predictions of Virgil Jordan, president of the National Industrial Conference Board are correct. Mr. Jordan says that the atomic bomb "vaporized the old-fashioned system of foreign trade and international economic or political struggle for markets and sources of raw materials." He envisioned a future in which there may be "an unlimited, inexhaustable, universal and completely flexible flow of atomic and molecular materials and energy, unrestricted by natural resources" and in which "goods and services may become available anywhere almost without limit or cost and with less and less labor of muscle or mind."

We face in the future, according to Mr. Jordan, "unlimited government armed with unlimited power—power of production, destruction and compulsion." And as to the sales problem, Mr. Jordan said that the main economic problem will be to get products "consumed" and "the main political problem to keep the population occupied and amused."

FDA Objects to Earache Remedies

IT IS REAL coincidence that we scheduled publication of an article on Ear Preparations for the same month that we must call attention to the arbitrary action indicated by the Food and Drug Administration in the following item of trade correspondence of the FDA:

"We are not unmindful of the persuasive reason which you advance in support of your view that earache drops should be made available to relieve pain until a doctor can be consulted. Before entering into this project dealing with earache drops we made a careful survey of the field. Earache, as you know, may be a symptom of a fulminating infection of the middle ear which can progress very rapidly to mastoiditis. It is our considered judgment that because of the need for prompt medical treatment of such involvement of the ear, *it is contrary to the public interest to sell a product for the temporary relief of earache.* Our long experience in the enforcement of food and drug laws convinces us that in a large number of cases the initial alarm of the patient which would prompt him to call a physician immediately would be allayed if through the use of ear drops the pain substantially decreased or disappeared. Because of this conclusion and because of the serious consequences likely to result thereform, we must take the position that even under the labeling which you propose, the product would be illegal." (Italics ours).

Here we have the FDA officials ruling off the market a type of product which is used to relieve pain in many instances merely because relief of the pain might, in some cases, allow a serious ailment to proceed to a more dangerous point. It is in line with the old idea of farm papers refusing advertising of something like Vick's Vaporub because the farmer using the product might really have pneumonia instead of an ordinary chest cold and using such a product would lead him into further danger by giving him a sense of false security. Also it is in line with those who think that the use of anacids or any other products to relieve stomach distress is dead wrong because the person using them might have ulcers, or worse he might have cancer and these conditions will grow worse due to the temporary relief given by these products so that when a doctor is finally called it might be too late.

What is the poor guy with an earache and no doctor immediately available going to do anyway? We had many earaches in our earlier days and never did they amount to anything but real discomfort that just about knocked us out. We used to get them from too much swimming and all we did was stay out of the water and get some earache drops to kill the pain. We remember very well developing one from too much swimming while serving on a subchaser in the Navy in World War I. We had no doctor on the ship but shortly after we got where there was a doctor. The doctor looked at the ear and told us there was nothing the matter. Believe us there was something the matter—it hurt like hell. But he just told us it would clear up in a few days and we had to suffer because he didn't give us any earache drops. We almost checked into sick bay in the Navy Yard because the damn little subchaser was leaving on a long trip and we didn't know whether the doctor knew what he was talking about or not. But he was right and after a day or two out the pain had entirely disappeared. And those nuts in the FDA say that earache drops shouldn't be allowed on the market,—what the hell do they know, did they ever have a real simple earache that hurt like the devil?

Labor and Inflation

WHAT the future holds in always a matter of speculation, certain trends seem to indicate certain things. In the first place labor is tougher than ever. They are demanding 30 per cent increase in the automobile industry and this demand will doubtless be made in other industries. But Economic Stabilization Director William H. Davis lost his position when the President abolished the Office of Economic Stabilization about two weeks after Davis had enunciated the policy of an increase of 50 per cent in labor's wages over the next five years with no increase in prices of the goods produced. The additional costs were to come out of reserves and profits of the corporations. Labor apparently made the mistake of stating its objectives in advance and announcing just whom they were going after first. But the Ford Company for one refused to go ahead under such a threat and other companies in other industries, including the chemical industry, plainly state that they will not go ahead with the spending of huge sums for expansion unless they know where they stand in their relations with labor. Labor, apparently sensing its mistake when it was already too late, finally announced that it would take five per cent increase for the present but eventually wanted 30 per cent. But the corporations have been put on guard and they are going to be exceedingly careful about what might happen after they have invested large sums in expansion and reconversion. The corporations

find that they cannot trust labor for, in some cases after they have signed a contract with a union, they find that further demands are made during the time that the contract has to run. These demands are made in such a way that definite breaking of the contract by labor cannot be charged. The union representative merely states that he knows that the contract has not expired but he does not think that he can keep the men working unless increases of some sort are given. He states that he knows the men are wrong in their attitude and should live up to the contract but that he is powerless to force them to do so. All of which indicates that some sort of control must be legislated with regard to labor.

That wages and prices will be higher is a foregone conclusion for the simple reason that higher values of everything—or a degree of inflation—is necessary to make our national debt fit our national income. Our national debt is now at the point where the interest, amortization, and other charges, plus the cost of running our Government is so large that if values of everything and wages were not increased, the percentage of taxation necessary to pay these costs would be so large that it would stifle initiative. The only way that we can be certain that our national income will be large enough to fit our national debt is to increase values and wages. And remember that plans are being laid to increase our national debt still further by staggering amounts.

Scientific Meetings Resumed

ONE pleasing result of the termination of the war is the announcement that meetings of the scientific sections of the Proprietary Association and the Toilet Goods Association are to be held this December. A return to these two scientific meetings as well as to scientific meetings of other associations in this industry will be of real value. The exchange of information that results from these gatherings is of inestimable value to the industry and to the public.

Unions and Retail Druggists

AS AN indication of what might be expected as a result of the unionizing of those employed in retail drug stores, a collective bargaining agreement was signed last month in New York City between the National Independent Pharmacists, Inc., and Local 1199, Retail Drug Store Employees Union, CIO, with the following provisions:

A reduction of the basic work week from 54 hours to 48 hours. A comprehensive industry-wide employer-financed group insurance plan. The employers contribute 3 per cent of the gross employees wages to an insurance fund jointly administered by the Union and NIP. The employees make no contributions. Employees receive $1,000 life insurance, $1,000 accidental death and dismemberment insurance, weekly disability benefits ranging from $15 to $40 per week for accident or sickness, surgical reimbursement benefits and complete hospitalization benefits for the employee and his entire family; the hospitalization benefits providing semi-private accommodations plus unlimited use of operating room, X-rays, anesthesia, etc. The insurance plan is underwritten by Prudential, and hospitalization by Associated Hospital Service of New York—the Blue Cross. The plan covers employees of more than 400 drug stores in New York City.

van Ameringen on French Perfumer Supplies

ANOTHER report on prospects for French perfume materials comes from A. L. van Ameringen who recently returned from a four weeks stay in France. In explaining the situation as to the "high prices which the Grasse producers have to ask," Mr. van Ameringen says:

"I can assure you that every one of them is alarmed by the present situation. They fully realize the danger to their industry caused by prices which exclude the normal use of their products. They are not trying to profit from the present conditions; on the contrary, you can rest assured that they will take all possible steps in an effort to arrive at more normal prices."

Mr. van Ameringen explains that the high prices are not the result of lower purchasing power of the French franc, but rather the result of the old law of supply and demand. Supplies are much smaller than in normal times and demand for domestic use and for export are far above what they were. The flowers for production of oils are exceedingly scarce and the growers are getting much higher prices as evidenced by the following comparisons of 1939 and 1945 prices: Violet leaves 1939, f.44; 1945 f8.65; orange flowers f4.04, against f44.50; rose de mai, f4.10, against f44.50; tuberose, f25.55, against f180. Male manual labor has increased per hour from f5.60 to f23.15; male trained labor from f6.70 to f27.25; women labor (used extensively in Grasse) from f3.80 to f20.66. The price of picking one kg. of jasmin flowers increased from f3 to f45.

With regard to supplies on hand, Mr. van Ameringen had the following to say:

"Contrary to rumors circulating in the United States, no flower plantations were plowed under for other uses and no plantations were destroyed for military reasons. However, all plantations are in subnormal condition due to lack of fertilizers, insecticides, fungicides and labor. On top of that a large percentage of the Jasmin plantations are between 20 and 25 years old, which means, at their life's end.

"Weather conditions during 1944 caused poor crops so that no carry-over of floral products existed in the beginning of 1945. The effect of transportation difficulties is handicapping the Grasse producers as well as all of France. It is nearly impossible to bring flowers grown outside of the immediate vicinity of Grasse to that city. Violets, for instance, come from a distance of about 150 km. from Grasse, and lack of trucks has created a complete absence of violet leaves absolute.

"No oak moss has been received from Yugoslavia and only mouse d'arbre is available in Grasse. A normal crop of rose concrete is about 1,500 kg., but this year the crop was about 800 kg. It was thought in the United States that large quantities of neroli would be available on account of the fact that the German Eau de Cologne manufacturers, large users of neroli, would be out of the market, but no surplus of neroli is on hand.

"Jasmin is very tight. Before the war Grasse produced 2,500 kg. of jasmin concrete annually, and imported another 1,500 kg. from French-owned plantations in Italy, Algiers, and Egypt, but since the liberation of France none have been imported from these three countries. Grasse production for 1944 totaled between 1,250 and 1,300 kg., meaning a deficiency of about 1,250 kg. for the Grasse production alone. In 1944 and 1945 some new jasmin plantations were started, but extremely hot and dry weather during July and the first week of August 1945 makes it impossible to predict the crop outcome. However, no larger crop than the 1944 one can possibly be expected. Grasse plans increased plantations for the winter of 1945, and if weather is favorable, counts on a 1946 crop of from 1,800 to 2,000 kg. of concrete. This is still below prewar production of jasmin concrete. The program is to continue new plantings until the Grasse production reaches 3,000 kg.

"Although Madagascar oils arrived in the United States since summer 1944, no shipments have as yet been received in France. Considerable orders were placed but lack of shipping has caused great delay in arrival. With the exception of a few tons of lemongrass, no essential oils or perfume raw materials have been received in France from any foreign country. Some bergamot and orris are expected soon from Italy. Due to lack of coal and raw materials, aromatic chemical production is at a standstill.

"Grasse products, being the only materials available to the French perfumers, have been consumed in far greater quantities than before the war. Many new perfumes and colognes are based entirely on natural French products. The French perfume industry, therefore, looks with alarm at any exports of the only materials still available to them, and is bringing pressure on the Grasse producers to take care of the French requirements before exporting.

"It is easy to see that increased national consumption at a time of subnormal crops is creating a serious situation. The Grasse producers, however, are trying to allocate their merchandise on a prewar basis between France, the United States, and England. They fully realize that export markets once lost may be lost forever."

The New Drug Regulations

IN OUR August Issue, Ben L. Blue called attention to a point with which he disagreed in an article by Erwin Di Cyan, entitled "New Drug Regulations and Proprietary Drugs," published in our April issue. Mr. Di Cyan has written us the following letter giving his point of view:

"On page 175, August 1945 issue of DRUG AND COSMETIC INDUSTRY, Mr. Blue points out a slight error in my article on the new labeling regulations, which appeared in the April 1945 issue of this journal. He states that those labels which mandatorily must bear complete information on indications and use of certain drugs need not bear this information on the label, which I had stated, but in the labeling. Although that is essentially correct, the term "label" as it appeared in one place was due to a typographical error, which I have not had the opportunity to correct, since galley proofs were not received by me previous to publication, for the article was published shortly after receipt of my manuscript by the DRUG AND COSMETIC INDUSTRY. However, as a point of information, my statement is functionally correct, because in a great majority of instances, there is sufficient space on the average label to facilitate the printing of all this mandatory information. Mr. Blue is technically correct in his statement that a circular can bear the requisite information regarding directions and uses, which would be enclosed in the package, but it is to the interest of the consumer, as well as the preference of the Food & Drug Administration that whenever possible, all matter should appear on the label rather than in a separate circular, which may easily be lost.

"The above, of course, applies to all drug products except those which, under the new regulations, are for ethical distribution only.

"Incidentally, my article failed to mention another condition which exempts a product from complete informative labeling. This condition consists of cases in which, although the ingredients can be *safely* used by the average layman, they cannot however be *efficaciously* used by him. For illustration, 5 grain tablets of Theobromine with Sodium Salicylate can be properly labeled for lay use to preclude untoward reactions from their employment, but since they are intended for the treatment of cardiovascular disease, the layman cannot use them, so that they would be efficacious for such conditions. It was intended by me that this topic would be covered in a separate article."

"Morning After" Doses

WHAT drinking men take for the "morning after" has been determined by the publishers of "True" magazine among its readers. The results of this survey are:

Another drink	18.5%
Bromo-Seltzer	10.5
Aspirin	8.2
Alka-Seltzer	7.0
Tomato Juice	6.8
Black Coffee	6.5
Milk	6.1
Water	6.0
Sleep—rest	4.7
Beer	2.8
Sal Hepatica	2.5
Soft Drink	1.8
Fruit Juice	1.6
All Others	17.0
	100.0%

Drug products do not show up in this survey as well as one might imagine totaling only 28.2 per cent, against 33.5 for liquid foods, soft drinks, water, and rest, and against 21.3 per cent for another drink and beer. The only place in the list from which drugs might draw some additional users is "All Others," but this classification might expect to increase the liquid food classification in the same percentage. We don't know how the drug manufacturers are going to boost their share of this market, but we think the ethical manufacturers ought to detail the doctors strongly in an effort to overcome the "Another drink" class.

Splitting Off the Ethicals

ALONG with the trend of drug manufacturers going further along ethical lines and separating their ethical activities from their other products, Norwich Pharmacal Company has announced the

formation of Eaton Laboratories, Inc. Eaton Laboratories is to market the ethical products being developed in the research laboratories of Norwich. One product has already been accepted by the AMA Council on Pharmacy and Chemistry and others will follow. Other leading companies that have taken a similar step are American Home Products with their ethical products all under the name of Wyeth, Inc., and their consumer-advertised products under the name of Whitehall Pharmacal Company; also William R. Warner & Co. who have reserved the Warner name for their ethical products, and formed Standard Laboratories for their proprietary items. Marketing of these two different types of preparations are different jobs. One job concerns itself with broad advertising programs, wholesaler and retailer concessions, and the like, while the other concerns itself with contacting the doctors and clinics and generally winning the confidence and cooperation of the medical profession.

Drug Trade Dinner and Conventions

OLD times will be here again next year as the Drug, Chemical and Allied Trades Section of the New York Board of Trade is planning to hold the Drug Trade Dinner at the Waldorf-Astoria Hotel next March. Also plans are starting to be laid for next year's conventions of the various drug manufacturers associations and we just hear that the American Pharmaceutical Manufacturers Association is planning its midwinter meeting at the Waldorf this December.

The A.D.A. and Rejected Products

THE Council on Dental Therapeutics of the American Dental Association recently published in its Journal a list of approximately 400 preparations which are "Not Acceptable for A. D. R." (Accepted Dental Remedies). The list contains about 60 analgesics and sedatives, about 60 dentifrices of the powder and paste varieties, about 50 mouth washes and antiseptic solutions, in addition to innumerable tooth ache drops, and many types of products which would be used in dental practice. However, it is not surprising that the list not only contains most of the names best known and accepted by the public in the lines of dentifrices and mouth washes, but it also contains many about which we have heard very little for many years. Also some of the products which were cited by the FDA or the FTC changed their labeling or their advertising many years ago and are perfectly acceptable to the enforcement agencies of the country. We think that the ADA Council would do well to revise its list in accordance with the present status of these preparations for it certainly serves no useful purpose to give the dental profession the false impression that these products are still not acceptable to the enforcement agencies or that they are not without merit within certain limits. The fact that the ADA Council does not care to accept them can be stated, but that is quite another matter. However, perhaps the Council feels that the dentists do not know much about this phase of the matter, and the long list with indication that notices of judgment or citations were published at one time or another makes the work of the Council appear more impressive.

Russian Male Nails Are Red

"AMONG the official classes of Russia the use of nail varnish is fashionable for men as well as women," said Mrs. Winston Churchill in her "Impressions of Russia," published recently in the London "Times," indicating that the Russians are certainly no slouches when it comes to developing markets for cosmetics. We wonder when many men's lines produced in this country will add nail lacquer as an additional item.

Vitamins and a Food Shortage

THOSE who are interested in the future of vitamins should take note of the fact that a "rough survey of the world" made by the Soil Conservation Service of the United States Department of Agriculture which shows "that there is no longer an abundance of good productive land to feed and clothe the peoples of the world; in fact, there is not a single acre to waste," according to Hugh H. Bennett, chief of the service. Reporting that 36 countries have undertaken soil conservation programs since the pioneer work of the Conservation Service in the early Thirties, Mr. Bennett says: "We know that soil is scarce around the world. There is barely enough to take care of the present population if it is used properly. However, it still is not being used properly."

The point that we are calling to the attention of the vitamin manufacturers is that under these circumstances food supplements are essential to maintain the health of the population of the world. Such a thing as diet containing the necessary vitamins without the use of synthetics is not possible in the world as it has been constituted for some years back and does not seem possible for many years in the future.

Quinine Prospects in Java

REPORTS seem to indicate that it will be possible to resume at once production of quinine in Java in comparatively large quantities. While production facilities undoubtedly were harmed during enemy occupation, the Netherland East Indies operated well below peak potential operation when they supplied world demands prior to the war. No exact estimates can be made until the condition of all cinchona plantations has been determined, and it is believed that all plantations outside of Java's Preanger district, including those in other parts of Java and on Sumatra's west coast, have been badly neglected. The Priangon plantations, however, were kept in a state of production, at least during the first years of enemy occupation, to help Japan meet its own needs and to permit the factory at Bandung to continue production, since because of lack of shipping space, Japan was compelled to keep this factory in operation so as to import finished quinine instead of bark.

In 1941 these plantations produced some 9,300 tons of bark, from which was produced some 743 tons of quinine, representing virtually the entire world demand. While it is possible that for some time to come the production of these islands will not be sufficient to meet the demand, the greater part is expected to be met successfully. Lack of shipping space may temporarily prevent shipment of great quantities of bark, but the Bandung factory's capacity for production of quinine is greater than the total world needs.

Workers at Stromberg-Carlson Company, Rochester, N. Y., receive their weekly vitamin supply.

Vitamins Still Mean Dollars

By WILLIAM T. DOYLE

THERE has been much said of late about vitamins having reached the end of the road. It would seem worthwhile, therefore, to examine the facts and plot the future.

Our grocer called me into his back room recently and I thought he was going to say he had saved a couple of lamp chops. But no, he was much more interested in showing me what had happened to his vitamin sales. At one time, he had what he called "a fair business," but it had dropped off to practically nothing. The grocery man made up his mind to get rid of the "damn things." I told him the slump in his vitamin business did not surprise me at all. He looked up somewhat startled and asked why. I explained that the physician is the key to the vitamin market, and when a doctor prescribes vitamins the patient goes to the drug store to get them. The grocer admitted that he just had never thought of the physician as being that important to the future of vitamins. I assured him that the facts would prove it. 'Fortune"[1] estimated that during

1944, $200 million worth of vitamins were sold through drug, department and grocery stores and through mail order houses.

A fair question would be to ask who has the vitamin market?

"Fortune's" study revealed that the ethical firms have between 70 and 75 per cent of the business. It is pointed out that the sales of Upjohn's Unicaps alone are estimated to be around $8 million annually, or about 5 per cent of the total vitamin sales.

Next to the ethical companies come the so-called dealer brands which have 20 per cent of the market. Sears, Roebuck's Super-Kaps rank very high in this category.

The third group according to "Fortune" is the proprietary brand manufacturers (Lever Brothers, Vick Chemical Company, Miles Laboratories, etc.). they have managed to win over 5 to 10 per cent of the total vitamin sales.

While it is agreed from the figures just presented that the so-called ethical firms have the major share of the vitamin business, it is useful to know just what the patient or consumer has to say about the influence of of the physician in regard to vitamin purchases. In this connection, an excellent 58-page report was prepared by the Research Department of the Curtis Publishing Company.[3] The following tables are taken from the Curtis study. Three facts stand out:

1. In most cases (43.7%) the physician first started the consumer taking vitamins.

2. The vitamins prescribed or suggested by the physician were obtained at the drug store in 79.8% of the cases.

3. If the consumer were to purchase vitamins for other members of the family, the physician would be the influencing factor as to what brand was used by 31% of those interviewed.

1. *What first started you taking vitamins?*

	Total		*Male*		*Female*	
	No.	*%*	*No.*	*%*	*No.*	*%*
Number of persons answering	400		139		261	
Number of replies	412	100.0	144	100.0	268	100.0
Doctor recommended	180	43.7	59	41.0	121	45.2
Friend or relative recommended	66	16.0	25	17.4	41	15.3
Advertising	39	9.5	17	11.8	22	8.2
Druggist recommended	20	4.9	10	6.9	10	3.7
Magazine articles	3	.7			3	1.1
Other reasons (including samples and experiment)	104	25.2	33	22.9	71	26.5

2. *Where were they obtained?*

	Total		*Male*		*Female*	
	No.	*%*	*No.*	*%*	*No.*	*%*
Number of persons answering	398		137		261	
Number of places mentioned	400	100.0	138	100.0	262	100.0
Drug store	319	79.8	116	84.1	203	77.5
Doctor	23	5.7	8	5.8	15	5.7
Department store	11	2.8	2	1.5	9	3.4
Gift or samples	6	1.5	1	.7	5	1.9
Grocery store	6	1.5	1	.7	5	1.9
House canvassers	6	1.5	1	.7	5	1.9
Mail order	3	.7	1	.7	2	.8
Other	25	6.3	8	5.8	17	6.5
Don't remember	1	.2			1	.4

(*Continued on page 558*)

HOW PHYSICIANS USE VITAMINS

Conditions	*Multiple*	*B Complex*	*A & D*	*Niacin*	*B-1*	*B-2*	*B-6*	*C*	*E*	*K*	*D*	*A*
1. Neuritis	43	354	18		54	2		4	1		2	1
2. Arthritis	45	68	148		7			5	4	1	61	2
3. Dermatitis	35	72	55	3	6	5	1	19	2	2	3	14
4. Convalescence	205	133	37		2			37	1	5		3
5. Malnutrition	298	122	51		1			7			1	
6. Old Age	109	62	13	1				2				1
7. Restricted and Reducing Diets	58	14	3					1	1			
8. Pregnancy and Nausea of Pregnancy	165	80	104		2		26	2	4	11	9	1
9. Infants, Children — Rickets	85	51	209		2			22	2	1	16	1
10. Anemias	78	91	19		1	1	1	5	1	3	1	1
11. Alcoholism	16	81	4	1	6			1		2		
12. Heart Conditions	13	66	5	3	1	1		6	1			1
13. Gastro Intestinal Diseases	65	112	20	1	4	1	1	15	3	2		1
14. General Debility	147	121	13		2			4			2	2
15. Neuroses	52	153	10	4	12			3	1	1		1
16. Respiratory Infections	68	26	122	1				12	1	2	1	12
17. Tonic — Loss of Appetite	242	307	53	1	8		1	8	1	1	2	
18. Threatened Abortion	5	4	2						27	2		
19. Vitamin Deficiency Diseases	137	179	64	12	2	10	1	45	1	9	2	3
20. Eye Diseases	31	45	68	2	8	11		10	1	1		13
21. Menopause	4	10	3		1			2		1		
22. Allergic Condition	7	5	6					25				2
23. Diabetes	19	18	2		1			1				
24. Hemorrhage	5	2	2					2		22		

The Drug Industry's

Problems of Reconversion Were Anticipated and Transition Should Be Made With Goal in Mind

With the stoppage of war production and the rapid return of the men of our Armed Forces to civilian life, the problem of reconversion of industry is becoming snarled because, for one reason or another, this great amount of people is not finding its way into the jobs to relieve the terrific shortage that has long existed. In fact the shortage of help of all kinds, which seemed to reach its peak during 1945 before the peace, appeared to become still more stringent after the peace had been accomplished. For one thing the returning soldiers who were employed before they entered the service, were largely in possession of long terminal leaves for which they were paid by the Government. Consequently they were not anxious to rush right out and go to work, feeling that they were entitled to a rest or vacation. Also, in many cases, they did not like the jobs to which they could return and were angling for something better. Many of these men were justified in seeking advancement due to the ability that they proved while in the service, and also because of the advancement which would have come to them if they had remained in their former occupations. The women who were dropped from the payrolls of the war plants will probably, for the most part, not return to work of this kind nor will they be wanted back if they can be replaced. The number of women dropped from these plants is quite a large group of employees.

Also those employees of plants doing war work were being given less hours of employment per week under reconversion and were therefore to receive a smaller weekly pay. This step was necessary on the part of management because the need for overtime no longer existed. But once having received this high pay during wartime, these workers were loath to take sharp cuts in weekly income and demanded increases in the hourly rate of pay so that they would receive approximately the same income. Obviously this was impossible for management to accept unless the prices of all things were increased proportionately and this means inflation and does those who receive the increased income no good. This is the basic cause of the wave of strikes. Pay rates will be increased a considerable amount, but the demands of labor will have to be compromised.

All of this is obvious in the news and in the conditions that everyone is feeling as we change from a war footing to a peace footing. How this is going to affect ordinary conditions in this country and how, in particular, it is going to change conditions in this industry is something that everyone wants to know. As ususal there are too many variables to permit a clear or concise answer or even a correct answer. For one thing, industrial centers were diversified greatly during the war years, and so naturally were large labor centers diversified as great industrial activity opened up in places where little or no industrial activity existed prior to our industrial effort to build the implements of war. Whether these newer industrial centers will be abandoned in part or in toto and the people who worked in them be forced to move to other industrial centers of the country has not been answered. However, it appears certain, from the difficulty that the Government is already having in trying to dispose of its surplus war production plants, that many of these newer industrial centers will be abandoned. And if this is so it naturally follows that the men who moved to these centers to work in these plants will have to move back where they came from or to places where there are located plants that can use their services.

Many industrial plants producing goods directly used in the war effort drew people from the surrounding territory who had never worked in a plant before. These people sometimes were farmers' helpers, garage mechanics, other types of labor, and, in no small degree, people who had been ducking steady or any employment for many long years because they could always eke out an existence in a much more comfortable way than holding a steady job. The threat of the draft, the criticism of their neighbors, the lure of lucrative wages, and other factors caused them to take positions in these plants. Now a large percentage of them are quite willing to go back to the easier existence. These people do not present any great problem and the dismissal of

Post-War Program

them from the war plants does not in marked degree have anything to do with the problem of unemployment. It is hoped that those of this type of employee who had local jobs will return to these jobs and thus ease the manpower stringency in the garages, laundries, farms, retail stores, and other places which they left to become engaged in war work for the reasons previously stated.

The colleges of the country will quickly absorb very large numbers of those being released from the Armed Forces and this will relieve the problem of the returning servicemen to a very considerable degree. There might be some who will feel that they have passed the time in life when they want to go to college because of age, marriage, or contemplated marriage but we must remember that the draft age started at 18 years of age and also that the Government is not only going to pay the tuition of those who go to college but a goodly part of their living expenses as well. We should think that under these circumstances, the colleges will fill up easily enough.

When many of the phases of the problem are analyzed, the problem does not appear so foreboding as one might at first imagine. The problems of reconversion are great and will consume a considerable period of time during which adjustments are going to make many people uncomfortable. But when reconversion is once accomplished, the problem of maintaining a prosperous condition in this country is going to overshadow the relatively simple problems of reconversion. For after all we know pretty well what to do about reconversion and the doing of these things will keep us busy, but we might not know what to do about maintaining prosperity once we get it and that is where the rub might come.

It is generally stated that we have learned so much from our wartime experience about how to step up production rates that we will be able to relieve practically all shortages of heavy goods within something like a year's time. Our industries will be able to disgorge such a deluge of automobiles, tires, refrigerators, washing machines, ranges, and everything else that within a comparatively short time all demands will be satisfied. Then we shall have to watch out. The only industry that gives promise of maintaining its demand for a very long time is the building supply industry, and this demand might shrink so that it will be filled much quicker than now appears possible.

For it must be realized that the sale of drugs and cosmetics depends largely upon the state of prosperity of the country. It is true that the state of health of the nation affects the sale of drug products materially, but the amount of money in people's pockets is the main deciding factor of high or low volume of sales. Likewise it is true that new types of cosmetic products, new classes of consumers, and other similar factors can and do cause a rise in the consumption of cosmetics. But here again if the people do not have the money to spend, the volume of sales cannot be high. In a recent issue of this publication we demonstrated that the dollar volume of sales of cosmetics is followed almost exactly by the disposable income of the country. Therefore, while the quantity of cosmetics sold over a period of years might not vary so widely as does the dollar volume during the same period of years due to price variations in the products bought and sold, still the amount of money spent for cosmetics does directly follow the amount of money which people have to spend.

The reductions in income taxes and luxury and other excise taxes now being planned in Washington will, when they become effective, automatically increase the disposable income in the country and therefore maintenance of volume in this industry should be much easier to attain. Beside the fact that income tax reductions will increase the amount of money available for cosmetics, the elimination of the twenty per cent excise tax upon cosmetics at retail will make possible the purchase of much greater quantities of cosmetics with the same money. Also under peacetime conditions, cost of production of cosmetics might be reduced somewhat below the wartime costs, and lower manufacturers' and retailers' selling prices might well follow. For a time labor costs might remain high and this might not only hold up the cost of finished cosmetics but also of the raw materials, packages and other items making up their cost, but within a comparatively short time an easing in these costs should make itself felt.

Elimination of the excess profits taxes and reduction in the personal income taxes will make it possible for corporations and individuals to accumulate some money from their financial risks and from their per-

(Continued on page 570)

TEEN AGE COSMETICS

THREE things happened in the cosmetic industry during the war years to alter an otherwise routine contest with war problems. (1) Perfume, senior in point of years to any other product in this ancient industry, underwent so sudden and so complete a rejuvenation that it held, for the first time in many years, the full center of the stage. (2) A rather bashful youngster in the industry, Men's Toiletries, suddenly matured into a vigorous and much sought-after personality. And (3), there was born an infant, Teen Age Cosmetics, which many in the industry firmly believe will be an infant prodigy.

The recent success of Teen Age Cosmetics illustrates, as with Men's Toiletries, and many other products of this industry, the essential importance of that illusive factor of timing. Cosmetics for children are not new. Excluding the baby products of talcum, baby oil, and the like, which for many years have been offered by Johnson & Johnson, Mennen, and others, since these have been considered ethical specialties rather than a part of the cosmetic industry, the columns of Beauty Fashion show several attempts to market a cosmetic line for children during the several prewar years. These lines, attractively packaged, all by newcomers to the industry, received active support from a number of leading department stores. There was never, at this time, any indication of consumer interest, and one by one these lines passed out of existence.

But now something certainly has happened and trade enthusiam among manufacturers and retailers for children's cosmetics gives ample indication that a change has taken place in consumer reaction to cosmetics for children.

In reality there are three markets here which will

always have to be treated as three separate entities:

1. The baby market, purely a utility purchase by the mother or a utility gift. While this may mean competition for the ethical specialities, with a cosmetic approach, the appeal of these products is largely to the mother for baby luxury after it leaves the first year period during which the ethical specialty has the advantage of hospital and doctor influence.

2. Children of 4 or 6 years to 12 or 14 years. This market, entirely a gift market, is receiving increasing interest and a number of new lines are already on display in leading stores. Appealingly packaged, with utility products such as sachet, soap, bubbling bath, dusting powder, shampoo, there is no question that these lines make sensible, appealing gifts. With eight to twelve million girls in this age group (nearly evenly divided into a million in each year) birthdays, Christmas, Easter, and many other gift occasions can lead to a substantial market as this idea spreads and receives general recognition.

3. The teen age or bobby sox market is here with a bang. Something has been happening in this group for a long time. To say that it is style conscious in its own way, that it knows exactly what it wants, and that glamor and lots of it is one of those things is merely to repeat the obvious. Teen agers, like their dads, have been snitching their mothers' cosmetics in huge volume for a long time before the cosmetic industry discovered it.

Now the problem of the industry, or of that part of it which has started to specialize in this field is to pursuade the teen age group, not so much to use cosmetics as to shun the products of the adults for their own specially styled brands.

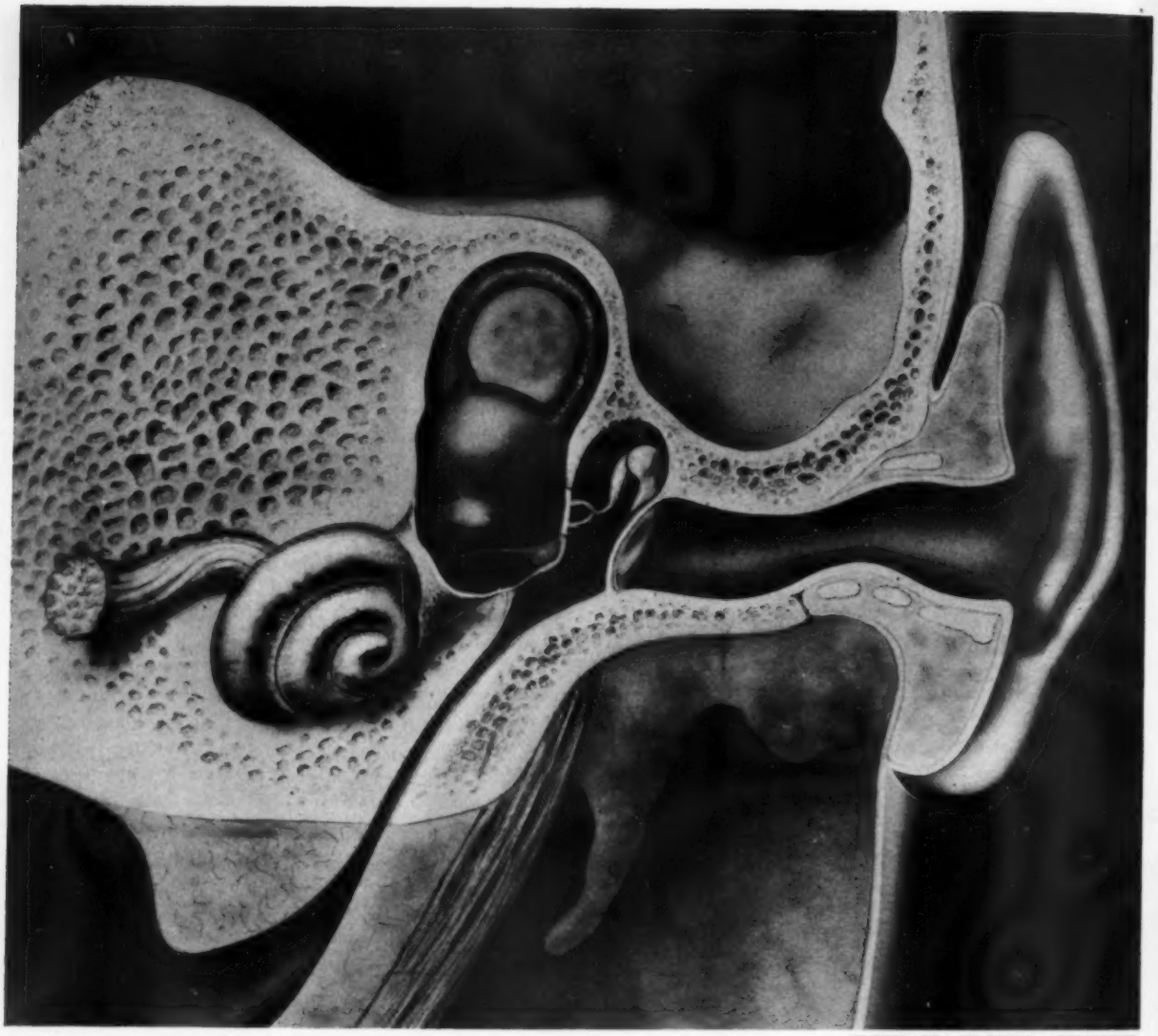
Fortunately for the companies marketing children's cosmetics, leading retailers are as fully alert to these markets as are the manufacturers. Store promotions are increasing and there is every evidence that leading stores, now thoroughly convinced that this market has matured to the point of definite consumer interest, will play as large a part as the manufacturer in crystallizing thinking into acceptance of children's cosmetics, both as a gift and as a habit.

Products in the cosmetic business have a habit of travelling a well defined path in spreading consumer use. Starting in style center cities, travelling to smaller cities, then to towns and villages, the road is sometimes long as we saw years ago with lipstick and nail polish. But sometimes, and more often today, the road seems very much shorter because it is traveled with such astonishing rapidity. While there is no data as yet, our personal opinion is that the teen age group will establish a record for speed if it is not already an established market. And this influence will be a potent factor in bringing acceptance for utility cosmetics for younger children in smaller communities where normally it would take many years for this acceptance to be realized.

As with men's toiletries, rumors indicate a substantial increase in the number of new lines in the children's field. Below we list some of those now on sale: Rose Laird, Seventeen, Inc., Helene Pessl (Little Lady); Parfait Sales (Sweet 'n Lovely); Horwitz & Duberman (Judy 'n Jill); Irene Blake (Kidmetics); Ali Baba Corp. (Debuet); Le Sonier.

LANETTE WAX SX: I used to see considerable mention of a product called Lanette Wax SX and quite recently I saw it mentioned in connection with the manufacture of penicillin creams. Can you tell me what Lanette Wax is and where it can be obtained? Seattle.

Lanette Wax SX is an emulsifying base claimed to have remarkable properties. It is extensively used in the manufacture of cosmetic and pharmaceutical creams and ointments. It was formerly available in the United States on import from England but has not been supplied in this country since the beginning of the war. I understand that even in England it was under allocation until very recently. As standardized, Lanette Wax SX was described as a partially sulfated or phosphated mixture of cetyl and stearyl alcohols. It is a whitish wax with a melting point of approximately 50° C. According to a footnote in the article written by W. E. Baker in the March 1944 issue of DRUG AND COSMETIC INDUSTRY, Lanette Wax SX can be approximated by combining nine parts of cetyl alcohol flakes with one part of sodium lauryl sulfate.



COURTESY BELL TELEPHONE LABORATORIES

EAR PREPARATIONS

By M. A. LESSER

EARACHE is a danger signal. Failure to heed this painful warning, to trace its causes and institute proper treatment too often leads to impaired hearing or deafness. The great pity is the fact that the large majority of ear diseases have their beginnings in infancy and childhood. Fortunately, as in other phases of modern therapy, progress in medical science has left its beneficial mark on the methods of treating ear disorders.

The importance of ear disorders as a medical and public problem is quite amply indicated in the finding that 3.9 per cent of those classified as 4-F were rejected for military service because of ear defects.[1] Many people have been surprised at the number of prominent persons, including outstanding athletes, rejected by the examining boards because of a "punctured ear drum" or the like. Tragic, too, are the latest U. S. Survey figures indicating that some 3,000,000 American

children in the school-age group suffer from impaired hearing. To this may be added an estimated 2,000,000 more under six years of age; making a staggering total of about 5,000,000 of the future adults of this country who are already hard of hearing or on their way to some degree of deafness.[2]

In considering infections of the ear some knowledge of the system and the mechanism involved is essential. The external ear or pinna, the visible portion of the ear, serves as a funnel to aid in the collection of sound waves. The external auditory canal, extending from the outer ear to the drum membrane, is lined with fine hairs and glands which produce sweat and wax. Through this canal sound waves and outside air pressures reach the eardrum. The drum membrane, in turn, conveys the vibrations produced by sound waves to the chain of delicate bones in the middle ear.

Leaving the parts visible to external examination, we come to the middle ear, an air-filled chamber lying between the drum membrane and the internal ear. The middle ear houses the ossicles and nerves concerned with the transmission of sound. The internal ear contains the semi-circular canals and other organs associated with maintaining body balance as well as the cochlea, which is concerned with the hearing function. The eustochian tube is a tiry passage connecting the middle ear with the nasopharynx. Normally, the eustachian tube conveys air at outside pressure to the middle ear, thereby equalizing the pressure on both sides of the drum membrane. In health, air is admitted into the middle ear through the eustachian tube during swallowing and yawning.[3]

As remarked by Moore,[4] the inner ear system consists of connecting air chambers of varying sizes and shapes with a blind end in the mastoid and an open end in the nasopharynx. The normal physiology of the ear depends upon this mechanism remaining intact. Once infection invades this mechanism, generally by way of the eustachian tube, its normal function becomes impaired.

Pain in the ear nearly always means inflammation. In most instances the earache is caused by an acute congestion within the middle ear, but it may be due to some abnormal condition in the external auditory canal, such as furuncles, impacted cerumen or a foreign substance. Lewis[5] estimates that in nine-tenths of all ear diseases the pathological process is on the inner side of the drum membrane.

Otitis media or middle ear infection is commonly caused by such organisms as streptococci, pneumococci and staphlococci. Enlarged adenoids in children who suffer repeatedly with colds is the outstanding cause of middle ear infection. Forceful blowing of the nose, when the nose is congested or stopped up, and especially when upper respiratory infection is present, may force infectious material into the eustachian tube and toward the middle ear. Similarly, diving and surf bathing may force infectious material into the tube or through a preexisting perforation in the ear drum.

Impairment of nutrition predisposes to otitis media. Repeated inflammations in the upper respiratory tract often causes chronic enlargement of the adenoids and tonsils. These structures may then press upon the exit of the eustachian tube, interfere with its proper ventilation and drainage and cause a condition which predisposes to middle ear infection. Otitis media commonly accompanies diseases such as pneumonia, influenza, whooping cough, measles and scarlet fever.

Aside from the danger of mastoiditis, repeated infections of the middle ear often result in permanent impairment in hearing. It is estimated that nearly 75 per cent of deafness occurs before the fifth year, and that nine out of ten cases of deafness occur before the age of twenty.[3] Earache is a common complaint, especially in children, and although many recover without the aid of a doctor, prompt and proper treatment is usually of vital importance. A large proportion of the permanently deaf may trace the beginning of their infirmity to an earache, which being disregarded, was consequently allowed to go without proper attention.[5] Sharp pain in the ear is often the first symptom of otitis media, with marked tenderness at the back of the ear. Without proper care, the ear drum becomes inflamed and finally ruptures with a discharge of pus and a decrease in pain.

Treatment of otitis media aims at clearing the underlying causal factor and at relieving the painful inflammation of the ear. Put briefly, treatment is essentially that of any acute fever, with special emphasis on the symptoms peculiar to middle ear infections. The introduction of sulfonamides has had an important bearing on methods of treatment and clinical experience has permitted an effective evaluation of these drugs. It is recognized that the sulfas are extremely useful but have definite limitations in otitis media therapy.[6, 7, 8]

Some clinicians[9] feel that oral sulfonamide therapy should be instituted early in all cases of acute otitis media and continued in adequate dosage over a sufficiently long period to insure against recurrence of symptoms. Chemotherapy, it has been found, definitely decreases the total period of illness, the duration of ear discharge and the incidence of complications, especially mastoiditis. However, these drugs must be used with discretion because they often mask the symptoms which otherwise would serve to indicate the progress of the infection.[4, 10] Then too, certain organisms are resistant to the sulfas and when symptoms continue unaltered by medication in full doses for three or four days there appears little advantage in continuing the drug.[11] A rather extreme view has been voiced by Babcock,[12] who feels that the effect of sulfanilamide in the treatment of acute otitis media is over-rated.

Of course, penicillin is bound to find important roles in treating ear infections and the indications are that it is an even more potent weapon than the sulfa drugs.[7] The few clinical reports[13, 14] available indicate that penicillin is effective in aural conditions when given parenterally, orally or locally. Recently, Swanson and

Baker[13] reported that infectious diseases of the ear can be effectively treated with penicillin because the anatomic structure of the ear permits local administration of the drug and because of organisms causing most acute infections of the ear are usually in the group considered susceptible to penicillin.

Of decided interest in this connection is the suggestion, made by the Kings County (Brooklyn, N.Y.) Pharmaceutical Society, that ear drops could be prepared by dispersing 10,000 units of penicillin in sufficient glycerine to make 10cc. It was recommended that the quantity prescribed should not exceed a ten-day supply; refrigeration being preferred but not essential.

The use of ear drops and local heat is standard in the general management of ear infections. Liquids instilled into the ear are useful for softening or dissolving wax, crust, scales and pus and as antiseptics, deodorants, astringents and local anesthetics.[15] Among the most useful preparations of this type are drops based on simple combinations of phenol in glycerine.[4, 6, 9, 15] As pointed out in the *Journal of the American Medical Association*,[17] "For the purpose for which it is intended —the relief of earache—there is no better medicament than glycerite of phenol in solutions of varying strengths." The phenol concentration employed may vary between 2 and 5 per cent; the following being a typical preparation:[15]

Liquefied Phenol	**1.3 cc.**
Glycerine	**30.0 cc.**

Used warm, such drops are instilled in the ear at two to three hour intervals to alleviate the pain of earache.

Glycerine, which forms the basis of most eardrops, is hygroscopic and causes an osmatic current from the middle ear thereby reducing pressure within the ear cavity.[15] Useful by itself in many ear conditions, pure glycerine lacks the analgesic qualities supplied by the phenol, which also provides antiseptic effects. Another point in favor of glycerine-phenol ear drops is that they may help sterilize the external canal before the drum ruptures.[19]

Although the simple combination works quite effectively attempts have been made to provide somewhat more elaborate preparations. One such, suggested in a standard reference text,[20] consists of:

Menthol	**20 grains**
Camphor	**20 grains**
Phenol	**15 grains**
Glycerine	**1 oz.**

The chief disadvantage of phenol in ear drops is its tendency, after two days or so, to cause disquamation. This tends to obscure the landmarks on the ear drum and make further observations difficult. To overcome this advantage other drugs with analgesic properties are often employed to reduce the amount of phenol or to eliminate it entirely. Thus, phenol may be combined with antipyrine, as in the following instance:[21]

Antipyrine	**1.5 parts**
Phenol	**0.6 part**
Glycerine	**30.0 parts**

In some cases, antipyrine is used as a complete substitute for the phenol, as follows:[21]

Antipyrine	**1.5 parts**
Glycerine	**30.0 parts**

Antipyrine, in turn, may be combined advantageously with other topically effective anesthetics to make pain-relieving ear drops, as in the example below:[22]

Antipyrine	**5.0 parts**
Benzocaine	**1.0 part**
Glycerine (98%), to make	**100.0 parts**

These three ingredients form the basis of a frequently prescribed brand of ear drops. Another proprietary product, made in the South, uses the same combination plus a rather small proportion of atropine sulfate.

A bit more elaborate is the aurol analgesic for relieving otitis media reported in 1943 from the School of Pharmacy of the University of Florida and consisting of:

Antipyrine	**4 grains**
Chlorobutanol	**6 grains**
Benzocaine	**5 grains**
Glycerine, to make	**1 oz.**

Where pain is persistent and incision of the ear drum is indicated, more strongly anesthetic preparations are used. Bomain's solution, consisting of equal parts of phenol, menthol and cocaine hydrochloride, is frequently recommended.[15, 18] Although it does lessen pain, its use is not without danger. Thirty per cent phenol in glycerine affords some analgesia. Some otologists prefer cocaine crystals (10 per cent) in aniline or equal parts of aniline and absolute alcohol.[23] Various other topical anesthetics for use in the ear have been developed, but all have certain limitations.

The last year or so has seen the development and marketing of ear drops containing sulfonamides. In several instances the sulfa drugs are combined or synergized with urea. Urea or carbamide is employed in such preparations not only because it helps to remove necrotic tissue and stimulates healing, but also because it cleanses and deodorizes the site of infection.[24, 25, 26] One preparation of this type is said[27] to be a chemical combination of the two drugs equivalent to 10 per cent urea and 10 per cent sulfathiazole in a glycerine base. In addition a small amount of benzocaine is included to eliminate any possible stinging sensation on application.

Somewhat on the same order is another topical preparation for use in ear infections. The published formula for this proprietary describes it as consisting of:

(Continued on page 566)

BRITISH COSMETIC SALES

In 1939 Great Britain exported toiletry and beauty products to a value of £969,000 or approximately 14 per cent of the annual total sales of £6,805,000, the remaining and greater volume of £5,835,600 going to the home trade, says the British Board of Trade. In 1941 when Britain had been at war two years and was already feeling the pinch of raw material and labor shortages, the export trade, as part of a policy of recovering maximum currency by exports operative in that period, rose to £1,553,100 or 32 per cent of a decreased total production of £4,921,200. These figures are of particular interest to competing countries in view of the British need, now more than ever, to pay for imports by exporting. They demonstrate that Great Britain could, if forced to do so by currency needs, greatly expand their export trade while limiting home consumption, as was in fact practiced in the years in question when sales decreased from £6.8 million to £4.9 million, but during which exports increased from £.969 millions to £1.55 millions.

The figures, available now for the first time were compiled at the request of the manufacturers of toilet goods and perfumery, who asked for detailed figures covering each type of goods. It was not found possible to give the data in the very complete form desired owing to difficulties in separating sales in some instances into precise classifications. The figures are therefore given in main groups only, and are in £100 units.

Figures to nearest .000.

PRODUCT	MANUFACTURER'S SALES DURING THE YEAR 1939			DURING THE YEAR 1941 (excluding Purchase Tax).		
	Total 1.	Export 2.	Home 3.	Total 4.	Export 5.	Home 6.
1. Face Powder	726.4	95.7	630.7	668.2	144.1	524.1
2. Rouge (compact, cream and powder)	95.5	13.1	82.4	72.6	17.4	55.2
3. Lipsticks	196.5	32.2	164.3	224.7	48.4	176.3
4. Liquid foundations	44.1	6.2	37.9	33.1	8.3	24.8
5. Talcum and body powder	390.7	106.8	283.9	405.7	205.2	200.5
6. Face Creams. (a) Vanishing, Etc.	684.8	64.1	620.7	479.8	72.0	407.8
(b) Cleansing, cold, etc.	305.1	54.7	250.4	167.9	46.6	121.3
(c) Skin foods, etc.	140.6	24.7	115.9	97.6	28.8	68.8
7. Hand Lotions and creams	154.7	5.4	149.3	101.7	9.1	92.6
8. Face Lotions	141.8	25.7	116.1	98.2	40.7	57.5
9. Perfumes	580.7	93.7	487.0	369.4	202.0	167.4
10. Toilet Waters	407.7	115.4	292.3	244.4	160.7	83.7
11. Hair Creams	1,029.0	81.2	947.8	705.3	84.5	520.8
12. Brilliantine: (a) Solid	199.1	101.7	97.4	194.6	161.9	32.7
(b) Liquid	184.4	40.6	143.8	129.3	55.1	74.2
13. Setting Lotions	132.5	6.8	125.7	71.5	11.7	59.8
14. Bath Cubes and Salts	342.5	20.2	322.3	110.3	17.4	92.9
15. Shampoos, soap and soapless (solid and liquid)	481.6	23.0	458.6	307.3	63.9	243.4
16. Hair Dyes (solid and liquid)	243.4	18.9	224.5	198.4	40.5	157.9
17. Other toilet preparations, excluding soap, shaving soap and dentifrices	324.1	39.5	284.6	241.2	34.8	206.4
	6,805.2	969.6	5,835.6	4,921.2	1,553.1	3,368.1

INTERNATIONAL

What Salesmen Should Know About AN INCOME TAX RETURN

By Harold J. Ashe, Tax Counselor

UNLESS salesmen use extreme care in reconstructing the essential facts incorporating all of their sales expenses and fully reflect them in their income tax returns they will find that they are penalizing themselves heavily for such negligence. Just as the government vigilantly guards against fraudulent returns, so too is it the taxpayer's duty to exercise vigilance in not overpaying.

Nowhere does the salesman err so frequently as in the tabulating of his recognized deductible sales expenses. Even in the lowest net surtax bracket of $2,000 or less, a taxpayer is now penalized at the rate of $23.00 normal and surtax on each $100 of deductible expenses that he overlooks in preparing his tax return. It jumps to $25.00, $29.00, $33.00, $37.00 and on up with each successive higher bracket that any of his taxable income is in, because such additional sales expenses come off the top layer of that taxable income.

Salesmen are especially lax in properly deducting in full such sales expenses as gifts to customers, business entertainment and proper costs of maintaining privately owned sales cars.

In the case of an automobile used in sales work, the salesman generally receives a flat per diem or monthly allowance for his car—sometimes a mileage rate. Frequently, however, such an allowance arrived at arbitrarily does not fully compensate for the business use that the automobile receives. To this extent, the taxpayer who merely reports such allowance and then cancels it off by showing a like amount spent for automobile maintenance is understating one of his principal sales expenses.

The true cost of maintaining an automobile not only includes the cost of oil, gasoline, and lubrication, but all other expenses necessary to keeping the car operating, including tire repairs and changes, car washing and

polishing, general repairs, insurance and garage rent, as well as parking fees while on business, and a fair rate of depreciation of the value of the car at time of acquisition. Where the car is used partly for pleasure, even though little during 1945 because of A books, a division of such general automobile expenses must be made reflecting the usage between personal and business. That part chargeable to personal use, of course, is neither deductible as a business expense nor as a personal deduction. Exception, however, would be any loss sustained by accident (not traceable to driver's negligence) or other casualty not covered by insurance. Such a loss would be shown under that category without respect to whether personal or business. Likewise, cost of car license and interest charges on car loan.

Also deductible is cost of travel by train, plane, bus or boat, showing the amount allowed by the employer as part of gross income, and the amount expended to determine adjusted gross income.

Entertainment expenses of a business nature may include dinners, theater tickets, admissions to sporting or other events, drinks and, broadly, anything of a similar nature designed to gain good will and promote sales. Here, too, the taxpayer must report and amount received from his employer for such purposes in deducting such expenses. The same holds true of gifts to customers or any other expenses partially, but not entirely, reimbursed by employer and which, therefore, constitute additional expense to the salesman.

Other business deductions may be made for subscriptions to business magazines and books necessary to the taxpayer's profession; membership in salesmen's union or associations; business letterheads and cards, where not furnished by employer, as well as advertising; employment agency fee; cost of indemnity bond; theft of samples paid for by taxpayer.

Let's take the case of a salesman and see how this works out. Let us assume that he has a salary and commission that amounts to $6,000 in 1945. He is married and has three dependent children. Now this salesman — and his name is legion — has been selling for 20 years and he knows quite well from long experience that that $6,000 is a long way from being his net income. But over the years — and long before an income tax ever worried him — he got in the habit of assuming certain business expenses and forgetting about them. Until recently he never had any particular incentive to jot down every nuisance expenditure he made. In fact, he probably has "guesstimated" from long experience that his $6,000 salary is really a $4,500 salary, in fact, and that the additional $1,500 is an arbitrary expense allowance, in lieu of an exact amount.

Now, however, the Treasury Department comes along and upsets such a casual attitude. The Treasury says in effect that the entire $6,000, less personal deductions and exemptions, is fully taxable unless the taxpayer can demonstrably show that some of it is sales expense.

So, our salesman, blithely ignoring these taxwise considerations, figures that the $300 car allowance just about takes care of that expense, forgets other expenses and reports a $6,000 income. He figures he has about $500 personal deductions for medical expenses, taxes, interest, etc., leaving an adjusted gross income of $5,500. From this he has a $500 normal tax exemption, leaving a normal tax income of $5,000. He has five $500 surtax exemptions, leaving him with a surtax income of $3,000. His normal and surtax on such an incomplete return totals $770.00.

Now let's see what would happen if he really digs down and recapitulates his sales expenses for the year. He might attach a statement to his return that would look something like this:

Sales Expenses

Gifts to Customers		$ 200.00
Business Entertainment		300.00
Salesmen's Association Dues		12.00
Salesmen's Magazines, books		6.00
Business Cards		5.00
Advertising		15.00
Employment Agency Fee		50.00
Theft of Brief Case (Not Insured)		12.00
Theft of Samples (Not Insured)		30.00
Indemnity Bond Premium		2.00
Parking Fees		150.00

Divisible Expenses

(Automobile 80 percent business; 20 percent personal)		
Gas, Oil, Lubrication	$ 150.00	
20 percent car depreciat.	180.00	
Automobile Repairs	125.00	
Car Wash	6.00	
Garage Rent	60.00	
Tire Repairs, Changes	9.00	
Automobile Insurance	35.00	
Total		$565.00
80 percent business expense		432.00
Total deductible business expenses		$ 1,234.00

Now, to recapitulate, this taxpayer would report, in addition to his $6,000 salary, the $300 allowed him for car operation and from this deduct $1,234, leaving him with $5,066 income, instead of $6,000. His normal tax income is now $4,066, and his surtax net income is $2,066. On this total normal and surtax would be $536.50, or a saving of $233.50.

Certain warnings must be sounded, however. Figures in the above list of additional sales expenses are cited only for explanatory purposes and it must not be inferred that these, in any respect, represent an "average" or "tolerated" amount for a $6,000 salesman's income or any other income. Deductible sales expenses, so far as possible, must be exact and represent totals actually expended. Particularly in regard to entertainment expenses, bureau auditors are inclined to be "tough" because this allowable expense has been

(Continued on page 563)

EUROPEAN PHOTOS

Brazil requires a license to sell drug products even when the goods are exported from this country. Harbor view of Rio de Janeiro.

Trade-Marks, Patents - - - And Reconversion

By JOHN H. GRAHAM

(International Patent and Trade-Mark Solicitor of New York City)

With the cessation of hostilities in the Pacific, another turbulent phase of the Twentieth Century is over, and we can again look to a sane way of living. Everywhere, however, reconversion raises its head and everyone is rushing madly around trying to establish a peacetime plan in the least possible time.

One of the most vital steps in any new program is to establish a position with respect to patent and trade mark matters abroad. Regulations are practically off with respect to all countries of the world except Germany, Japan, and Japanese occupied countries so that patents, trade-marks, and the like can now be filed in France, Belgium, Denmark, Holland, Czechoslovakia, Norway and Italy, countries which have been "closed out" for the duration.

The regulations in these countries are also quite of interest. In all of them it is possible to utilize a United States filing as a basis for belated claiming of Convention rights back to filing dates as early as 1939, so that by prompt attention to foreign filings there may be no loss of rights due to war conditions. Admittedly, some of these countries have declared their moratorium subject to reciprocity, which up to now the United States has not offered, but there is a good chance of some such legislation being brought into being here, and in any case the best procedure is to file now and argue later.

It might seem that the wasting of valuable "reconversion" time on such intangibles as trade-marks, patents, and kindred matters, is not something that can be justified right at the moment. However, there are some points to consider as convincing arguments to justify the effort.

A moratorium of the nature which is issued by such countries to cover belated filing of matters of the sort defined usually has a limited time, or may be unlimited in time and then suddenly closed. Also, third party rights are usually exempted by such moratorium, so that an enterprising citizen of the country may start a *bona fide* use of your trade-mark or patent, thus preventing you from interfering with his continued use.

Finally, as specifically applied to the drug and cosmetic industry in general, there is the point of getting in first with your goods, and adequate protection of your industrial property rights is necessary along with the effort of moving in quickly.

It is no secret that a liberated Europe is wide open for American goods. Our armies have in many cases acted as advance agents of good will and good living in the American way. Already inquiries are coming from all over the world asking for solid connections with United States firms and no industry is greater in demand than that which generally covers cosmetics, toilet goods and pharmaceuticals.

Thus, this is a good time to look to your foreign market, whether to revive what you used to have, or to establish a new hold therein.

In Europe, as a specific area, it is possible today to register your trade-marks or patents in all countries except Germany proper. This, therefore, opens up one area to be considered. Did you have trade-marks or patents existing before the war? Then you should check that they are in good order with all taxes paid and so on. The moratoria grant delays for late payment of annuities, renewal of trade-marks and so on, and you should not put it off, but check on your existing material now, to be sure your interests are preserved or, if necessary, revived.

Did you contemplate this area or a part of it as a "post-war" project for expansion of your export plan? Then now is the time to register your trade-marks there, and effect patenting of your inventions, so as to prepare the field. With them you have an advantageous bartering point when negotiating with representatives in the countries with respect to agency agreements. It is a simple matter to carry out these negotiations through the medium of well-known and established foreign attorneys.

Another area to be given careful consideration with respect to goods of the description above given is the fertile field of South America. There is a constant and ever increasing demand for agencies in those countries who desire to represent United States firms, as I have dealt with in previous articles in this publication.

Finally, the British Empire is worth considering, particularly since the British people as a whole have had a closer contact with Americans than ever before possible, creating generally a mutual feeling of confidence and respect. Australia and New Zealand are countries to whom many "in the know" are looking for great things. There is a demand by their people for better living and the promised opening up of immigration there, will result in many more customers.

Thus the foreign situation for this post war period looks extremely bright and is well worth time taken to investigate your position and see if you can expand your market. It is, however, very unwise to try out the area first, with the thought in view that later you can always consolidate your trade-mark and patent position. Some countries have specific laws which prevent that by seizure of goods and like acts. In others you may lose your rights, for instance, by another person registering your mark or filing a patent application before you get around to it.

For example, in Spain it is now compulsory to register a trade-mark there and failure to do so causes prohibition of sale of your goods. Yet Spanish agents are showing a great interest in United States goods and inquiries are quite common as to possible representation with respect to toilet goods and kindred products.

Also, the well-known "piracy" of trade-marks in some of the Central and South American countries has in no way diminished and may increase if firms here are careless as to their rights.

It should also be borne in mind that some countries have specific conditions regarding exported goods, particularly of the type used for internal or external human uses, these being unrelated to trade-mark or patent matters, and therefore before proceeding to expend time and energy in the foreign selling plan such matters should be considered.

Brazil, for example, has recently introduced Board of Health regulations relating to pharmaceuticals and similar products requiring a license to sell even when the goods are exported from this country. But in Brazil a trade-mark owner is well protected by regulations to really prevent infringement of the owner's rights, and certainly of all the South American countries none is a more lively market and a potential field for expansion of exports from this country than Brazil.

Whenever warnings and advice of this nature are placed on your desk you rightly say "Just more work for me to do. It's too much trouble and will have to wait." Such, however, is not the case at all. Your job is only to choose your intended market or potential market and then to hand over the rest of the work to competent specialists in International trade-mark, patent, and kindred matters. By this means a logical manner of procedure is preserved and you are left clear to control your selling program. By following the logical way you will obtain the recommended and highly advantageous result of applying for your trade-marks and patents in the countries themselves before or during the time you are planning your actual exporting so that by the time you have completed your

(Continued on page 564)

BLACK STAR

Britain's Retail Drug Trade

THE retail drug trade in Britain is encountering a difficult situation with which our country has long been familiar. Breaking out as it does from time to time, we are quite familiar with Britain's retail druggists' problem—the efforts of chain stores and cooperatives to take a further share of the national drug, cosmetic, photographic, and allied business from the retail pharmacists. As in our country, this difficulty in Britain is having its counterpart in most other spheres of retail trading.

Attention is especially directed to this by the intimation from the Chairman of the Scottish Cooperative Wholesale Society, Ltd., that his organization is ready to develop in every direction post-war, and that the fullest efforts will be made to extend existing spheres.

The development of proprietary branded medicines, lotions, and devices has largely, but not entirely, destroyed the former status of the pharmacist. This means that the pharmacist, whose long years of experience, skill, and knowledge, his qualifications resulting from college training plus shop apprenticeship culminating in compulsory acceptance by examination in membership in the Pharmaceutical Society gave him a status as a professional practitioner, no longer enjoys this status. The fact that branded proprietary goods can be bought freely without the pharmacists' premises—a result of the greatly developed manufacturing and marketing technique in this field—has opened a very wide field of competition which the chains have been quick to exploit as have the smaller individual retailers of all types, and latterly, the cooperatives. Now after six years of comparative peace and standstill during which a war was being fought but development in this phase

(Continued on page 564)

Glycerin Market Strong as Shortages Develop in Important Raw Materials

With the war over almost everyone thought that all sorts of raw materials, containers, and other necessary items would be plentiful. In fact this belief was greatly strengthened by the rapidity with which the Government removed restrictive orders covering many materials. But with the restrictive orders removed, the situation in many materials has not improved, and in fact in some instances appears to be worse than it was during the war.

One of the raw materials that has become very tight since the cessation of hostilities is glycerin. Glycerin was very tight and closely restricted during part of the war, but before the war was over it was in plentiful supply. The fact was that glycerin was being produced at a rate far above prewar due to a Government order requiring greatly increased recovery of glycerin from soap. Now that restriction has been removed and the small soapmakers, who never liked to bother with the recovery of glycerin, have abandoned this practice, leaving the glycerin in the soap. This saves them a lot of trouble and gives them a better soap. Also there remains a shortage of soap due to the supply of fats and oils for soap manufacture still being curtailed. The fat recovery plan by which housewives saved their fats and finally received two red points for each pound is bogging down seriously now that the emergency has passed and now that points on meat are not so important. Soap is so short that an increased amount of "builders" (salts such as sodium carbonate to extend soap) must now be used.

But despite all the shortages of fats and oils, despite the general shortage of soap and the leaving of some glycerin in the soap, the production of glycerin for this year is far above prewar levels and will probably continue at this high level long into the future. Why then is there such a shortage of glycerin? The reason lies in a new use for glycerin. This new use is the production of alkyd resins for the production of paints. These paints found wide use for Army vehicles during the war since they produced a required finish. They are going to find a very wide use in the post-war world. Alkyd resins are mainly made from phthalic anhydride and glycerin. The heavy demand for phthalic anhydride for production of alkyd resins, dimethyl phthalate, and other things required by the Armed Forces during the war resulted in a vast expansion in the plants producing phthalate anhydride in this country. Now phthalic anhydride is available for production of alkyd resins but the glycerin is not. Makers of phthalic anhydride are hard put to dispose of their production at the present time and are threatening to shut down some of their plants if an immediate outlet is not found.

But glycerin is not only short because of this one new and greatly increased demand. It is short also because many who substituted other materials in products when glycerin was under restriction are now changing back to glycerin. This only makes a bad situation worse. There is a feeling in some quarters that many users of glycerin stocked up very heavily when restrictions were lifted since it is always the policy of many users to carry stocks of this material far into the future once it is included in their formulas. These heavy purchases against the future make for a temporary scarcity that will be relieved later.

At the moment the future of glycerin looks strong. It does not appear that a real easy market in glycerin should exist for any length of time if this new use and the impending boom in this country follow predictions. However glycerin has always been an item that is very strong marketwise for a fairly long period of time only to turn easy again. As it is a by-product of the production of soap, it is never produced in accordance with the demand that exists at the particular time. When demand for glycerin is at its lowest ebb, production could be at its highest peak, although this is quite too much to expect. But the situation that exists today will not be relieved as long as the demand for alkyd resins remains at its present level, and there does not seem to be much chance of this demand receding, but rather it appears that the demand will surge ahead as the glycerin to fill the demand becomes available.

Very tight situations have developed in many other products such as vanillin, phenol, the salicylates, saccharine, potash salts and others. Some of these are due to strikes that have since been settled but which set shipping schedules far behind while the strikes were in progress and which threw additional demand upon the manufacturers who were producing while the strikes were in progress. In the case of potash salts a peculiar situation has developed in that this country is now one of the main production centers of the world. In fact

(Continued on page 570)

Centralized Responsibility means protection for your finest

A POLICEMAN speeds traffic on its way and protects life and property by keeping things from happening. Centralizing responsibility for your entire package with one source will prevent costly traffic jams, delays and other troubles on your production lines.

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Packaging and Selling

Cosmetics in Drug Stores

Some revealing figures on cosmetic sales in drug stores are furnished by a combined survey made under the auspices of Curtis publishing and the National Association of Retail Druggists. It says that "sales of items in this classification represent 10.3 per cent of the total volume of the 1,190 stores reporting. As with the prescription department and the soda fountain department, the sales of these items in individual stores may reach a high portion of total business if the department is properly promoted. Many stores were found reporting 30 per cent of total volume done in these items. Even after a very careful audit of the schedules, the authors of this report are convinced that some stores did as high as 50 per cent of their total volume in these lines.

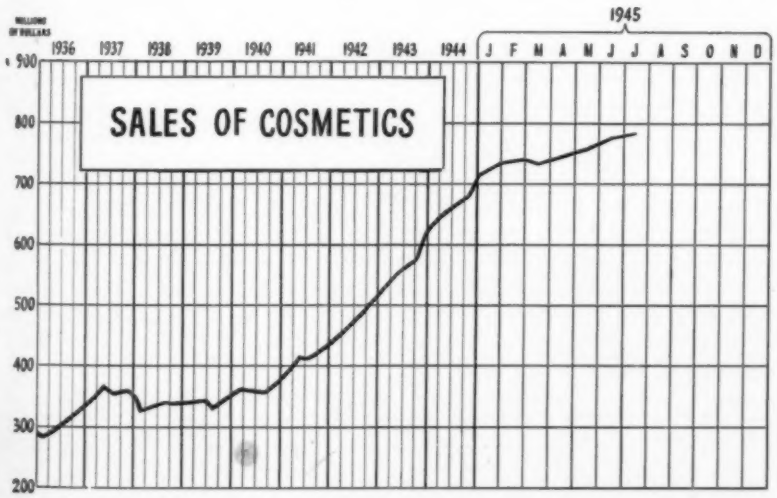
"Toilet goods as a per cent of total business increases from the lowest volume store through that group of stores doing just less than $30,000.00 volume per year. The percentage then appears to drop for the next higher volume grouping but to again gradually increase from the 9.6 per cent done by stores in the $30,000.00 to $50,000.00 volume classifications to 11.1 per cent of total volume for stores doing $100,000.00 volume and over.

"A close examination of the schedules discloses that total store volume is not a criterion of volume of business done in these items. The decision on the part of the operator as to which departments will receive his greatest attention and promotion appears to hold the answer as to percentage of toilet goods volume done. It is often found that where the owner is concentrating his attention on the prescription department or the soda fountain department the sales of toilet goods are comparatively low. In numerous instances a high fountain traffic is used to build up sales of toilet goods by directing the merchandising plans of these items to the traffic created by the fountain. Quite obviously in doing this other departments of the store are denied some preferred merchandising attention and space. Stores in the highest volume classification show a better than average tendency to merchandise this department. Of all stores in this classification, 16.7 per cent did more than 15 per cent of their total volume in these lines as contrasted to 11.1 per cent of the stores doing less than $10,000.00 volume.

"Stores located in the larger cities have no advantage by reason of city size in the sale of toilet goods. Of the stores located in cities of 20,000 or more population, 10.8 per cent do more than 15 per cent of their total volume in toilet goods, while among their small-town cousins located in towns of under 20,000, 17.5 per cent do more than 15 per cent of their volume in these lines. A greater portion of stores in cities of 20,000 or over do less than 6 per cent of their total business in these items than is true among stores in smaller communities. The average portion of total volume represented by toilet goods sales for stores in cities of less than 20,000 is 11.2 per cent and for cities of 20,000 or over 9.5 per cent.

"Since regulations covering the collection of federal excise taxes on toilet preparations are uniform for all parts of the country, it is thought desirable to see what portion of the total business done by the average drug store is represented by sales of taxable toilet preparations.

"Items taxable under excise tax regulations are found to bear an increasing portion of the total business done as the store volume increases. Stores doing under $10,000.00 volume per year made 3.6 per cent of their March 1945 sales in taxable toilet preparations. This percentage of taxable sales to total sales



Retail sales of cosmetics for the twelve months ended with July 1945 totaled $783,000,000. This compares with $772,775,000 for the twelve months ended with June 1945 and with $657,506,000 for the twelve months ended with July 1944.

increases regularly as store volume increases so that stores doing $100,000.00 or more volume per year are found to have 5.7 per cent of their total sales composed of taxable toilet items.

"The 326 reporting stores with no soda fountain in operation are found to do a greater portion of their total business in these items than stores operating fountains. This is true in every volume classification excepting stores doing $100,000.00 or more volume. Among the stores without fountains those doing from $50,000.00 to $100,000.00 volume per year are found to have the highest portion of their total business accounted for by these products.

"The general tendency among stores with fountains is for the sales of taxable toilet items in relationship to total sales to increase with store volume. The average for stores under $10,000.00 volume is 3.1 per cent of sales and for those with $100,000.00 volume or over 6.0 per cent of sales. The variation in this statement, found in stores doing from $50,000.00 to $100,000.00 volume per year, is very slight."

The Cosmetic Trend

Hair coloring, colored hair rinses, hair regeneratives; in fact anything that can keep the hair youthful, or at least attractive, are likely to rank high in the list of "reconversion" cosmetics. Stores have neglected some of these articles for a number of years, but they will come back heavily in the near future. Drug stores are already beginning to show them in the window. Incidentally there is a men's appeal to them, although men, generally, must be satisfied with the lesser effective coloring preparations, unless an enterprising manufacturer comes out with something new and practical, fitted especially for the short cropped hair of the man customer.

Make-up and facial preparations also should feel this post-war demand of the job seeker. The manufacture and sales promotion of this group of articles is likely to present a series of novel problems, though. The customer who looks for a job, or wants to keep her present one, has an economic stake in her personal appearance that will want her (1) to purchase cosmetics of known effectiveness; (2) to forget about their cost, because she can easily afford to pay a reasonable percentage out of her income for cosmetic attention in one form or another.

Of course, this switch from war-thinking to reconversion thinking by the customers will not last forever. After a while counters can be expected to return to their pre-war psychology. In the meantime, however, there are a few fortunes waiting for the cosmetic manufacturer who has the goods and the perspicacy to dramatize their use.

Right now buyers are trying to impress upon their manufacturers that "the war is over." Not all have fully realized that reconversion has arrived and is not just something to be talked about for the future.

Quiz Kid

For those who missed the story titled "Quiz Kid" in Sept. 17 "Time" and are interested in the career and background of one of the newest stars in the cosmetic firmament, "Small, dark Lewis Judah Ruskin was a drugstore stockboy in Chicago when his father gave him a cryptic warning: 'You'll never be successful; ambitious men never are.' Lewis shrugged, and set out to become the 'General Motors of the drug and cosmetic industries.'

"Last week, 25 years later and $10 million richer, Lewis Ruskin was well on his way. He wound up a deal that made him one of the top powder-&-perfume men in the U. S. The deal: a 30-year contract with the Evelyn Westall Co. of New York (White Shoulders, Menace and Gay Diversion perfumes). For the 'world sales rights' (virtual ownership), Ruskin will pay Westall $600,000, promises to buy $30 million worth of goods from the company during the next 30 years. From his new eminence, he curled a lip at the big names in perfumery, said: 'Who is Chanel? They sell less than $1,000,000 worth of perfume a year.'

"Young (42) Mr. Ruskin, no violet for modesty, attributes his success to his sharp, morning-glory wits. He likes to remember that he graduated from eighth grade at the age of ten years and nine months, from high school at 14 ('I would have been a quiz kid'). He became an apprentice at Chicago's high-class, high-priced Sargent's drugstore (today he owns half of it). He quit to take a crack at almost everything else, even spent 18 months in Italy studying to be an opera tenor, eventually decided that he was a druggist after all.

"With $5,000 he had saved, he formed the North American Pharmacal Co. (drug products) in Chicago. Three years later he prospected a new field: the smalltown drugstore. He dazzled the outlanders of Sterling, Ill. with a garish, big-city drugstore, complete with huge drug and cosmetic departments, a well-stocked food section. It was such a hit that he moved into five other towns, now has a chain of 54 stores in five states (Illinois, Wisconsin, Indiana, Iowa and Minnesota).

"As king of the small-town drugstore, he found that the most lucrative end of the drug business was selling cosmetics. He decided it might be even more profitable to make his own. So he bought Chen Yu, big-selling 'class' nail lacquers, for $2 million. When Chen Yu grossed $10.7 million in 1944, Ruskin bought or formed nine other cosmetic companies, including three in England. Now he is dickering for eight French companies.

"This year his drug and cosmetic business should gross $24 million. Next year ge expects to see it hit $36 million. But he yawns like an idle lily at the idea that his record is a rags-to-riches one. Says he: 'The Alger story is a bore.' "

The Glass Container

Although the glassware industry has had little difficulty in obtaining raw materials for some time, it cannot increase production to any appreciable extent because of an acute shortage of skilled workmen, according to a report in the N. Y. "Times."

Many veterans are not returning to their old jobs in the industry as speedily as had been expected and manufacturers have been unable to augment their staffs to the point believed necessary because of the refusal of the union to take in as members the number of employees desired, it was said. One company which lost 245 men to the services has thus far had only five return although many others are known to be out of uniform.

Further complicating the picture is that it takes from five to six years for an apprentice to become an experienced worker.

Because of this situation most manufacturers expect to continue their allotment system of filling orders for a considerable length of time.

Glass

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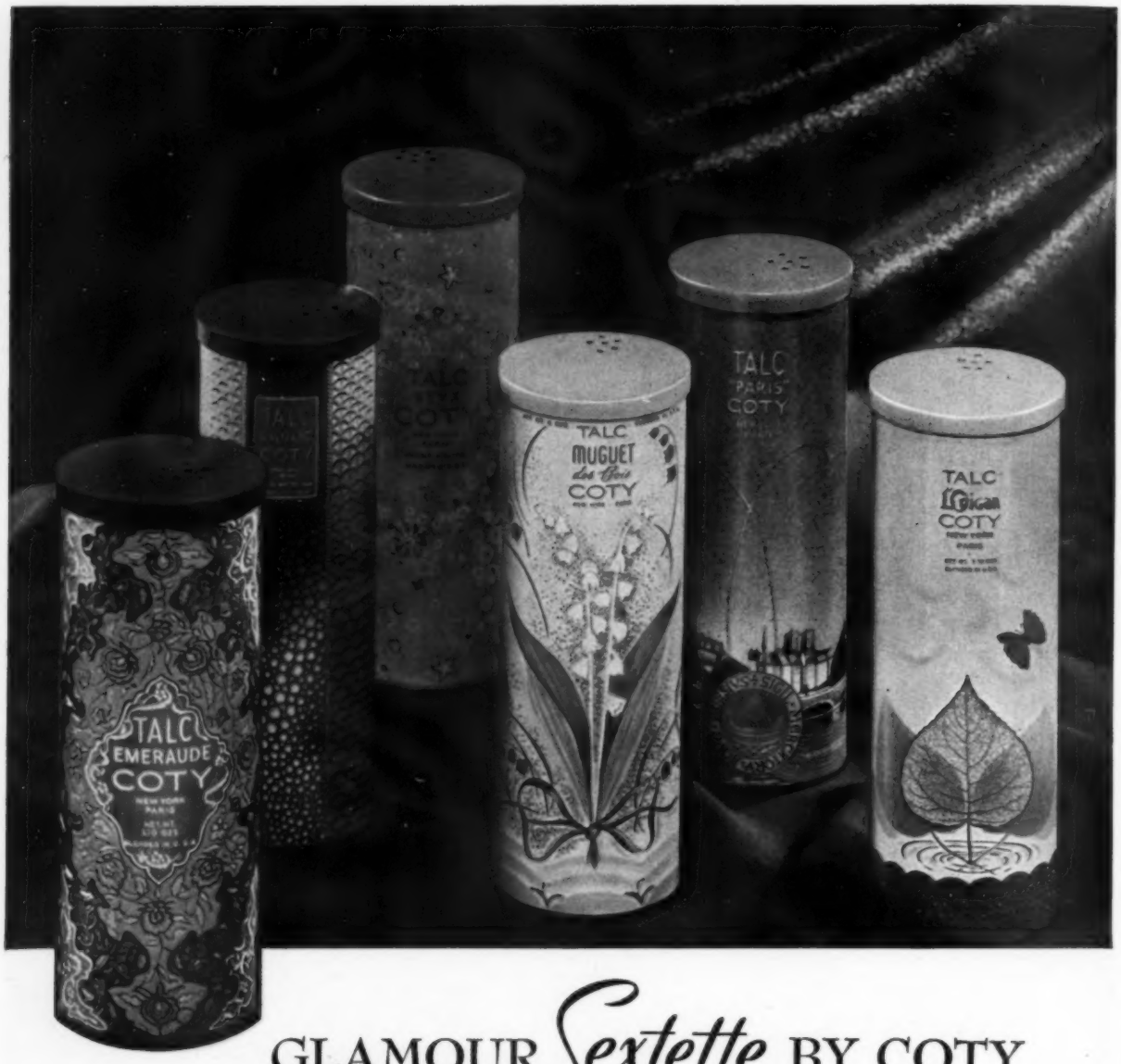

GLAMOUR *Sextette* BY COTY

CRAFTSMANSHIP BY RITCHIE

Here six famous Coty tradenames, six beautiful labels by Coty, are given striking identification in packages by Ritchie. The unique plastic sifter tops*—in harmonizing pastel shades—rotate *freely* to start or cleanly shut off the flow of powder. Filling is easily accomplished through full size opening of fibre tube. Plastic top *snaps* into place over felt disc, which prevents powder from sifting through. Thus art and artisanship are combined to produce practical "beauty in packaging."

*container patents pending

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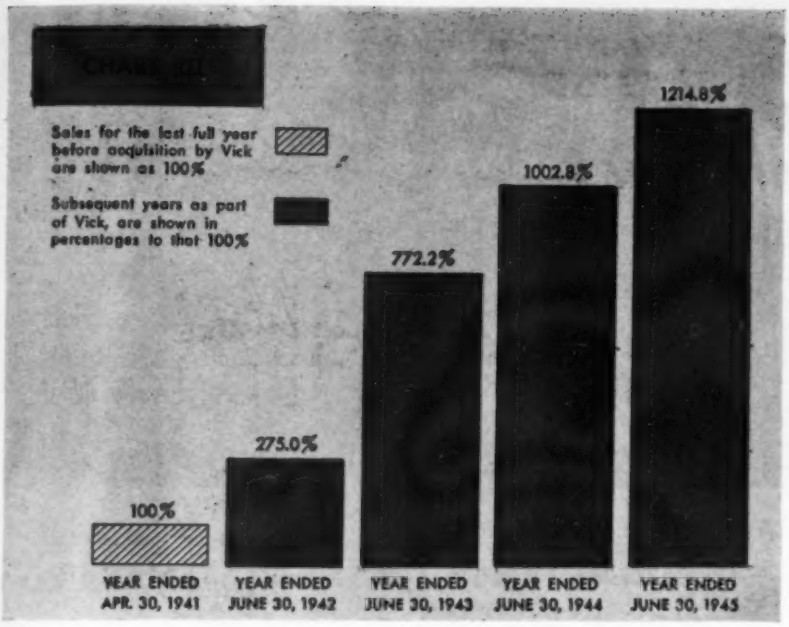

Sales for the last full year before acquisition by Vick are shown as 100%
Subsequent years as part of Vick, are shown in percentages to that 100%
100%
275.0%
772.2%
1002.8%
1214.8%
YEAR ENDED APR. 30, 1941
YEAR ENDED JUNE 30, 1942
YEAR ENDED JUNE 30, 1943
YEAR ENDED JUNE 30, 1944
YEAR ENDED JUNE 30, 1945

Vick Reports

Vick's annual report featured several charts — one of which is reproduced above. It dramatizes the growth of the market for class men's preparations as personified in the growth of Seaforth. With sales for the year ending April 30, 1941 representing 100 per cent, the following year went to 275 per cent, 1943 to 772 per cent, 1944 to 1000 per cent and 1945 to 1200 per cent.

The other notable cosmetic acquisition, Matchabelli, reproduced at the right, has done well although nothing like Seaforth. With 1940 representing 100 per cent, the business had gone to 115 per cent by June 30, 1942, 156 per cent by 1943, 250 per cent by 1944, and 417 per cent by 1945. Stradivari is the line's best seller.

The Wm. S. Merrell Co. has gone from 100 per cent in 1937 to 146 per cent in the year ending June 30, 1941. The next year went to 205 per cent, 1943 to 315 per cent, 1944 to 373 per cent and 1945 to 385 per cent.

J. T. Baker's sales were 121 per cent by June 30, 1943, from 11 per cent in 1941. They fell back to 117 per cent in 1944 and increased to 148 per cent in 1945.

Plastics Future

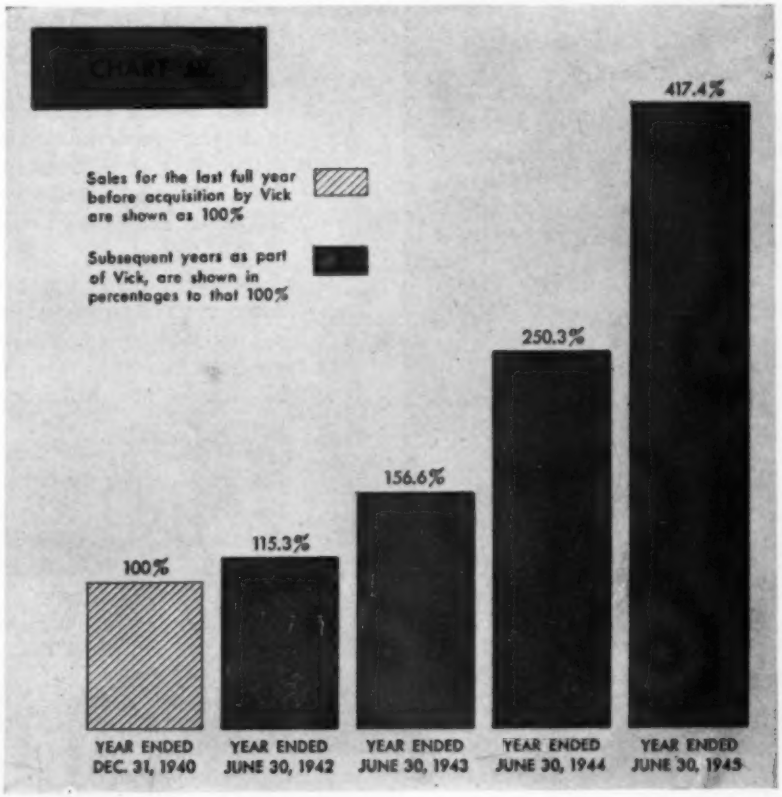
While use of plastics materials from 1939 to 1944 rose from $78,000,000 to $332,000,000, or 325 per cent, indications point to an additional growth of 20 to 25 per cent to a new peak in the predictable future, according to W. S. Landes, president of the Plastics Materials Manufacturers Association. He reported that the nation's plastics materials producing industry progressed twenty years in research during the five years of intensive devotion to war output.

"An important factor in the post-war use of plastics will be the increased use of electronic heating and the availability of new type compression, injection and extrusion machines for installation in the plants of fabricators and molders. This means a larger contribution to employment because most machines in service today are obsolete and a large re-tooling program will get under way immediately," he said in a report in the N. Y. "Times."

Mr. Landes was convinced there will be no battle between plastics and light metal alloys because both have definite applications and the price relationship between the two is such that neither aluminum nor magnesium is likely to be substituted for plastics unless they are highly desirable for a specific purpose.

The Metal Container

According to Wendall H. Funderburg, vice-president in charge of sales for Continental Can Co., "four years of war has affected thinking in the packaging field in three important respects. First of all, it showed us—including our customers and ultimate consumers—how good the metal container really is. Tin cans by the billions—containing food, munitions, medical supplies and scores of other products—were shipped to every part of the world where they were subjected to extremes of heat, dampness, rough handling and long storage, and yet they came through with colors flying. Furthermore, the war demonstrated the versatility of the tin can. Metal containers were made according


Sales for the last full year before acquisition by Vick are shown as 100%
Subsequent years as part of Vick, are shown in percentages to that 100%
100%
115.3%
156.6%
250.3%
417.4%
YEAR ENDED DEC. 31, 1940
YEAR ENDED JUNE 30, 1942
YEAR ENDED JUNE 30, 1943
YEAR ENDED JUNE 30, 1944
YEAR ENDED JUNE 30, 1945

MAGNESIA

IT BOOMERANGS ON THE GLASSMAKER

. . . IF HE USES TOO MUCH!

WHEN used in exact amounts, magnesia helps make the glass batch melt faster and improves the working qualities of the glass. If too much is used, the effect is reversed, making the batch not easier, but harder, to melt!

If these were magnesia's only contributions, glassmakers might not bother with it. Magnesia also reduces the effect of heat on the finished glass by lowering the coefficient of expansion; and even more important, magnesia helps prevent devitrification—(the formation of very fine crystals as the glass cools). So magnesia is actually a valuable glassmaking ingredient.

The magnesia used in glass batches is added in the form of dolomite or dolomitic burnt lime. Dolomite is a natural combination of calcium and magnesium carbonate. This means that when calculating his batch quantities the glassmaker has two oxides to consider in this new material instead of just one.

However, through long years of experience and research, Armstrong's glassmakers have learned to make the most, not only of magnesia, but of all the other ingredients they use in making glass. Their success is, of course, one of the big reasons why Armstrong's Glass continues to enjoy a reputation for top quality.

Send today for our free, illustrated booklet, "Men and Glass." You will find that it contains many interesting sidelights on the making of fine glass. Address Armstrong Cork Company, Glass and Closure Division, 3810 Prince Street, Lancaster, Pennsylvania.

ARMSTRONG'S GLASS

and

ARMSTRONG'S CLOSURES

Packaged in a simple jewel-like box of white velvet lined in white satin, the one-ounce bottle of Dana's 20 Carats perfume has label and stopper of gold. Flecks of gold are suspended in the perfume.

---

to specifications never heard of before, but in every case they did the job, and did it well. All this," he said, "has convinced everyone that tin cans 'can take it,' and has resulted in a greater rush of business than we can handle for months to come.

"Secondly," he said, "although former metal containers customer generally accepted war substitutes with good grace, most of them now want to get back into metal, as packing, handling and shipping costs again become factors in the competitive pricing of their products. Moreover, consumers have come to identify substitute packaging with an economy of scarcity; as soon as goods again become plentiful, the public will demand that the protection which sturdy metal packages afford be restored.

The packages holding Revlon's newest shade, Fatal Apple, carry a scarlet apple rimmed with jeweled serpents and butterflies photographed against a stark white background.

"Finally, a number of manufacturers of 'substitute' containers now seem to believe that their products can retain a war-time position in a post-war era. This wishful thinking may be understandable, but it has led to absurdities whereby actual packaging shortcomings have been masqueraded as merchandising advantages."

Packaging Machinery Short

New types of packaging machinery will not become available for from one year to one year and a half, while prices of current models will cost 5 to 10 per cent more than the pre-war types, representatives of the industry declared at the panel held in connection with the fifteenth annual packaging conference of the American Management Association at the Hotel New Yorker.

The panel was composed of E. H. Balkema, director of packaging and printing, Colgate-Palmolive-Peet, Co.; George N. Graf, director of merchandising, Quality Bakers of America, Inc.; F. S. Leinbach, assistant to the general manager, Riegel Paper Co.; Carl E. Schaeffer, sales manager, packaging division, Stokes & Smith Co., J. H. Toulouse, chief specifications and service engineer Owens-Illinois Glass Co.; Martin Ullman, industrial designer; R. V. Wilson, director customer research division, Continental Can Co., Inc.

Tempting Color

"Fatal Apple" is the name that Revlon has given its newest color. Fatal Apple is a clear scarlet designed to highlight the new fall high fashion colors and fabrics. According to Revlon the publicity on Fatal Apple will be the most sensational ever given a new color. The packages are amusing—a scarlet apple rimmed with jeweled serpents and butterflies photographed against a stark white background.

Elegance in Perfume

Dana Perfumes has made its 20 Carats perfume available to American women for the first time. This fragrance was introduced in Paris in 1933. Packaged in a simple jewel-like box of white velvet lined in white satin, the one-ounce bottle of perfume has label and stopper of gold. Continuing the gold theme, flecks of gold are suspended in the perfume to make the bottle a handsome dressing table accessory. Twenty carats perfumes retails for $22.50 an ounce, and there is a 3½ ounce cologne for $4.

Havoc! is the name of Lucien Lelong's newest make-up shade, dramatically packaged in the Havoc shade on white. Havoc comes in lipstick, rouge, face powder and Quick Change.

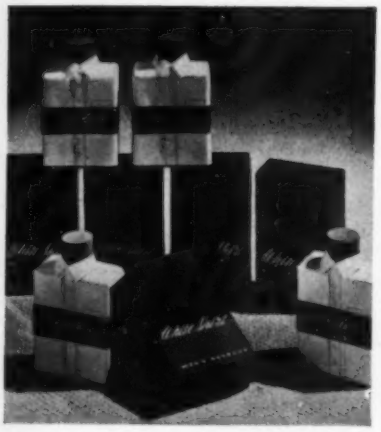
Pat-A-Kake

Pat-A-Kake is Elizabeth Arden's contribution to the foundation market. It seems to fall into the cake make-up category, the texture of the product is somewhat creamy, it is applied with a piece of cotton squeezed out in water or skin lotion and smoothed over the face and neck. The consistency is such that it leaves the skin soft and dewy-looking and is the cover-all type which helps to hide blemishes and makes the pores less obvious. Pat-A-Kake comes in a round flat compact so that it is easy to slip into the handbag. It comes in ten shades and retails for $1.00. It does seem that Elizabeth Arden has achieved something between the water soluble type of cake make-up and the so-called liquid cake make-up in Pat-A-Kake.

Elizabeth Arden's Pat-A-Kake, a new foundation, comes in a round flat compact that is easy to slip into handbag or the pink container may be used as a dressing table accessory.

More Profit...
IN "BREAD & BUTTER" DRUG ITEMS
Proprietory preparations begin with expensive elements, and progress, through costly conversions to consumer acceptance. Research, ingenious equipment, clever selling and sound packaging all play roles in winning brand-name preferences.
Near the end of this chain is carton selection where design and printing appeal bring the consumer to the point of purchase. A fine appearing carton—the finest—is a very small part of product cost—you can afford to buy the best.
The formula for wise carton buying is simple—a reliable folding boxmaker, one who uses Ridgelo Clay Coated boxboards regularly. We believe the pennies spent on Clay Coated folding cartons will justify the dollars that go into the production of your quality product.
Ridgelo
CLAY COATED
BOXBOARDS
Save Waste Paper—don't waste it!
MADE AT RIDGEFIELD, N. J., BY LOWE PAPER COMPANY
Representatives: Bradner Smith and Company and Mac Sim Bar Paper Company, Chicago • H. B. Royce, Detroit
Gordon Murphy and Norman A. Buist Los Angeles • A. E. Kellogg, St. Louis • Philip Rudolph & Sons, Inc., Philadelphia

Forever Amber, Kay Daumit's perfume, was inspired by Kathleen Winsor's book of the same name. There will be a one dram and a one ounce package available by November first.



Packaged in a unique and distinctive manner, Kay Daumit's White Shirt cologne wears a trim white label around the front and over the top of the rectangular bottle with a collar encircling the blue cap.

Cargo is a new, nationally advertised line of men's toiletries introduced by Duncan Storm Ltd. Glossy earthenware jugs are used topped by large crimson plastic caps.

Initialed Toiletries for Men

Monogram grooming requisites being launched by L & K Laboratories of St. Paul, feature a new appeal, plus an attractive package. The new idea is simply that of personalizing each flask with a set of initials. Monogram toiletries are packaged in single, double or triple packages. Each flask is suede covered with a hardwood cap. The initials are easily and quickly set into a clip attached to the suede. The idea of the initials of course, makes the products highly desirable for gift purposes.

White Shirt

Kay Daumit's White Shirt men's cologne is packaged in a unique and distinctive manner. It is keyed according to Kay Daumit, to meet the popular demand of the returning serviceman for "a clean, white shirt." A trim white label is formed around the front and over the top of the tall, rectangular bottle with a collar encircling the blue cap. A matching blue band wrapped around the bottle completes the appearance of a freshly laundered shirt and carries the White Shirt name. The cologne carries a clear refreshing fragrance like all the clean things the serviceman has dreamed about—a crisp bouquet that is as masculine as shirts themselves. The outer carton in a neat two-tone blue combination is also attractive. Kay Daumit plans to market a White Shirt gift set with cologne and talcum in an attractive unit.

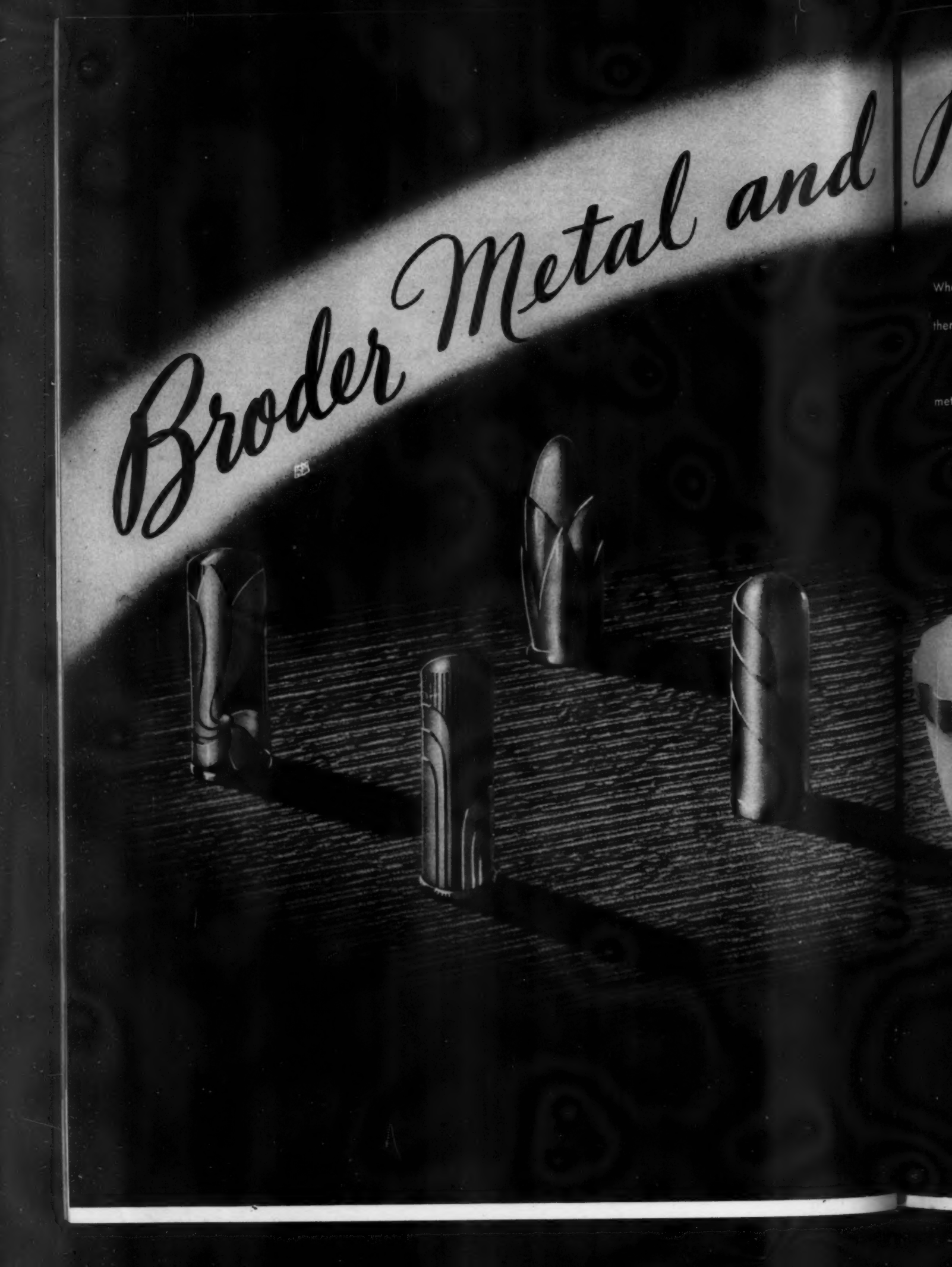
Cargo Motif

Cargo a new, national advertised luxury line of men's toiletries has been introduced by Duncan Storm Ltd. Cargo products at present include after-shafve lotion, talc, men's cologne and shaving soap, with other items still in preparation for early release. The scent is described as crisp, fresh and suggestive of tropic mosses. The packaging is attractive and definitely on the masculine side. Glossy earthenware jugs of a deep cordovan shade are used topped by large crimson plastic caps bearing a Marco Polo emblem. The product name is lettered in stencil style to suggest cargo shipments, travel, etc., on a background design resembling that used on ancient maps. Gift set boxes for two to six items are of deep brown and decorated with tropic isle artwork in several colors. Advertising and sales promotion will be conducted on a large scale throughout the country.

A miniature book that is a good looking replica of an antique book holds Dorothy Gray's Right Red lipstick, rouge, and nail enamel. It may later be used as a match box or utility box.

Among the many entrants into the men's field is Sultan's Fez, an attractively packaged line that carries an amusing fez for a stopper, launched by Charles, Inc., of Hollywood.

L & K Laboratories personalizes its Monogram grooming requisites for me by furnishing a set of initials which are easily slipped into the metal groove on each suede covered flask.


Broder Metal and

d Plastic Creations

Whatever your particular requirements in Cosmetic Containers, Broder will furnish them from stock or make them to your order in designs which can be *exclusively* yours.

Broder designing staff and packaging engineers have a wealth of experience in metals and plastics, which is entirely at your disposal without obligation.

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AND ASSOCIATES

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THE PACKAGE OF THE **FUTURE**

THE PALLETIZED LOAD
A WAR-BORN DEVELOPMENT

In Postwar planning many large shippers will be turning to the Palletized Load, because of the experience gained in this war.

Designing shipping containers to fit a freight car and NOT to hold a given amount of goods was a critical problem which was solved militarily.

There is NO reason why industries cannot adopt this procedure when the contents "Fit the Container" — which Fits the Pallet — which Fits the Boxcar.

Prior to the Palletized method, it took 14 men a half a day to break material out of stowage and load a car, handling each container separately. Now one person on a fork truck can load the same car in less than 2 hours.

For large users — booklet on the Palletized Load, illustrated with official photographs.

SAVE GAIR WASTE PAPER

ROBERT GAIR COMPANY, INC., NEW YORK • GAIR COMPANY CANADA LIMITED, TORONTO

Folding Cartons • Box Boards • Fibre and Corrugated Shipping Containers

Duraglas Amber Blakes, Wide Mouth French Squares, IS Oblongs. A few of the hundreds of Duraglas Container Styles and Patterns.

DISTINCTIVE BOTTLES
to dress up your products

NEED a distinctive bottle to give new sales appeal to your product? Or a "different" appearing bottle for a new item?

To keep your costs down, ask us for recommendations from the hundreds of stylish standard Duraglas Containers obtainable at low-volume prices because of volume production.

When you specify a Duraglas bottle, you can be sure of great strength with light weight, of accurate capacity, sparkling purity, and many subtle refinements in design that make for faster filling, easier pouring and greater stability.

* * *

Write us for quotations or details. Tell us what you wish to package and for what markets. Then we can help you faster.

OWENS-ILLINOIS GLASS COMPANY
TOLEDO 1, OHIO
Branches in all Principal Cities

Duraglas
TRADE MARK REG. U.S. PAT. OFF.
CONTAINERS
Preserve, Protect and SELL BY SIGHT

Coated Lithwite Cartons

SPEAK UP... AND SELL

THAT'S WHY SMART MERCHANDISERS WANT THEM, LIKE THEM . . . PREFER THEM TO "SILENT SALESMEN"

BRING THE GOODS closer to the customer! Let the package do a self-selling job! That's the idea in today's modern stores . . . and that's the reason the "Silent Salesman" package is on its way out. Wide-awake merchants want, *and feature*, products packaged to speak up and sell . . . products packaged in *Coated* Lithwite. This machine-coated paperboard, pioneered by Gardner-Richardson six years ago, gives cartons a dash and color-brilliance that makes them stand out in any display. *Coated* Lithwite's surface is chalk-free and velvet-smooth—reproduces product pictures with a startling realism that speaks right out and stops shoppers.

When can you get Coated Lithwite cartons?

That's not easy to answer. Right now, the backlog of Coated Lithwite orders in the Gardner-Richardson carton plants is tremendous. Leaders in the field of merchandising are pushing us to capacity to get the sales advantages of cartons made of this revolutionary paperboard. However, here's a suggestion: get in touch with a Gardner-Richardson sales representative and discuss the matter of future delivery.

Note These Outstanding Coated Lithwite Advantages

1. Made by a revolutionary process. *Coated* Lithwite is the brighter, whiter paperboard that is formed, made and coated in one high-speed operation. Proved and improved for six years.

2. Means more eye-appealing cartons. *Coated* Lithwite's smooth, velvet, chalk-free surface forms a better base for printing inks and plates—reproduces even the smallest type cleanly, crisply. Brings colors up brilliantly—gives halftones a sharp realism.

3. Fewer jammers and leakers. *Coated* Lithwite scores without flaking or shattering. Takes a positive, tight seal.

The GARDNER-RICHARDSON Co.

Manufacturers of Folding Cartons and Boxboard

MIDDLETOWN, OHIO

Sales Representatives in Principal Cities: PHILADELPHIA • CLEVELAND • CHICAGO • ST. LOUIS • NEW YORK • BOSTON • PITTSBURGH • DETROIT

PLUTO WATER holds an enviable position on the list of products whose prestige has not diminished with the years. Today, as in the past, the distinctive Pluto Water trade mark is a familiar sight in stores and in homes all over the country. Pluto Water is bottled right at the springs and controlled exclusively by the French Lick Springs Hotel Company, French Lick, Indiana.

Like so many other nationally recognized products, Pluto Water is securely sealed with Crown Screw Caps. This is the cap that does a double-duty sealing job. Patented Deep Hook Thread construction gives Crown Screw Caps double sealing pressure with the same amount of application force—yet they are easy to remove. Crown Cork & Seal Company, Baltimore 3, Maryland. *World's largest makers of metal closures.*

AID TO NATURE

CROWN CLOSURES

Plaskon MOLDED COLOR
for America's Finest Merchandise

Plaskon Molded Color Tray and Bottle Closures for Permanent Wave Set Produced by Raymond Laboratories, Inc., St. Paul, Minn.

PLASKON MOLDED COLOR brings richness, sparkle and distinction to any product where eye appeal is important in gaining sales favor.

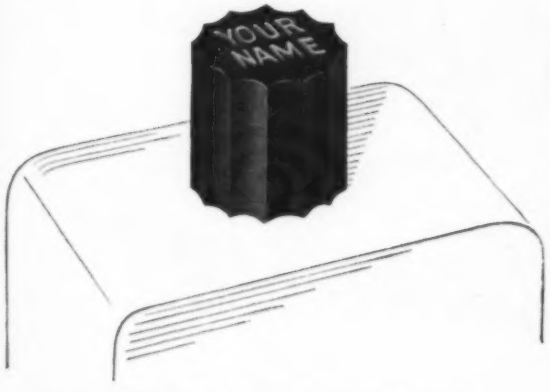
Plaskon is a plastic molding material available in a wide range of permanent colors, that will harmonize with every product need. It can be molded into unusual shapes and designs, to secure eye-catching distinction for your product.

Plaskon is completely impervious to the effects of alcohol, acetone, or other common organic solvents. It is not affected by oils and fats; is odorless, tasteless and inert. For safe, attractive containers and closures for your merchandise, ask your molder to demonstrate all of Plaskon's advantages.

PLASKON DIVISION, LIBBEY • OWENS • FORD GLASS COMPANY
2110 Sylvan Avenue • Toledo 6, Ohio
Canadian Agent: Canadian Industries, Inc., Montreal, P. Q.

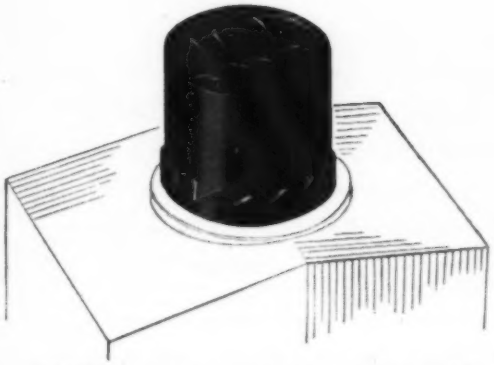
PLASKON
TRADE MARK REGISTERED
MOLDED COLOR

DISTINCTIVE DESIGN SUGGESTIONS FOR YOUR PRIVATE MOLD CAPS



DIGNITY and simplicity keynote this modern, low-cost Armstrong's Artmold Cap. Your brand name can be depressed and filled in with eye-catching color.

CLEVER use of Artmold Cap designs can make your package look taller or shorter . . . help give them the individuality they'll need to compete in post-war markets.



CAMEO design possibilities in Artmold Caps are almost unlimited. They add extra style and distinction, step up sales of your package.

ARTMOLD Caps, with your exclusive sculptured design, will build customer recognition and demand for your "luxury trade" packages.

ARMSTRONG'S *Artmold* PLASTIC **CAPS**

TO COMPETE SUCCESSFULLY in post-war markets, your packages will need every bit of extra style and distinction you can give them. You can add a lot of both with Armstrong's Artmold Caps. Get free design suggestions today by sending a sample or drawing of your package to Armstrong Cork Co., Glass and Closure Division, 3810 Prince Street, Lancaster, Penna.

. . . m-m-m-REAL BOSTON BAKED BEANS

Early New England Housewives took great pride in their culinary accomplishments. Not content with making "just another pot of beans," they persisted in exploring various methods of cooking and seasoning baked beans to give that savory, taste tempting flavor. Today, real Boston Baked Beans are still made from recipes developed in colonial New England. This "know how" assures consistent results and inimitable flavor. It has established Genuine Boston Baked Beans as a definite standard of comparison.

Carr-Lowrey glass containers are something very special, too. Our aim is not to make the most . . . but the very best glass containers available to modern packagers. Steadfast adherence to this idea for more than half a century has made Carr-Lowrey containers first choice among buyers who are quality conscious.

CARR-LOWREY GLASS CO.

Factory and Main Office: BALTIMORE, MD. • *New York Office:* 500 Fifth Ave. • *Chicago Office:* 1502 Merchandise Mart

"The bigger the family—the better the service"

THE greater the variety, too—especially if the family is big like Continental's. Our new packaging service is based on a combination of experience, technical skill, designing and engineering "know-how", with increased resources and facilities. This combination assures you of getting the *best* package for your product.

Continental now covers every phase of safe packaging—metal containers, liquid-tight paper cups and containers, fibre cans and drums, steel pails and other heavy-duty containers.

Uncle Sam is still our chief customer. But keep your eye on Continental! And on Continental's trademark, too! The Triple-C stands for *one* company with *one* policy—to give you only the very best in quality and service.

Tune in: "REPORT TO THE NATION" *every week over coast-to-coast CBS Network*

Continental Fibre Cans — These composite cans (with fibre bodies and metal ends) meet a definite packaging need. They bridge the gap between all-metal cans and paper containers, folded boxes or bags. They're made for easy conveyor and filler handling, in a wide range of shapes, sizes, and diameters, with [a] great variety of metal dispensing closures — "naturals" for safe shipping of drugs, cosmetics and chemicals.

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PAPER DIVISION

FIBRE DRUMS The Container Co., Van Wert, Ohio

LIQUID-TIGHT FOOD CONTAINERS — Boothby Fibre Can Co., Roxbury, Mass.

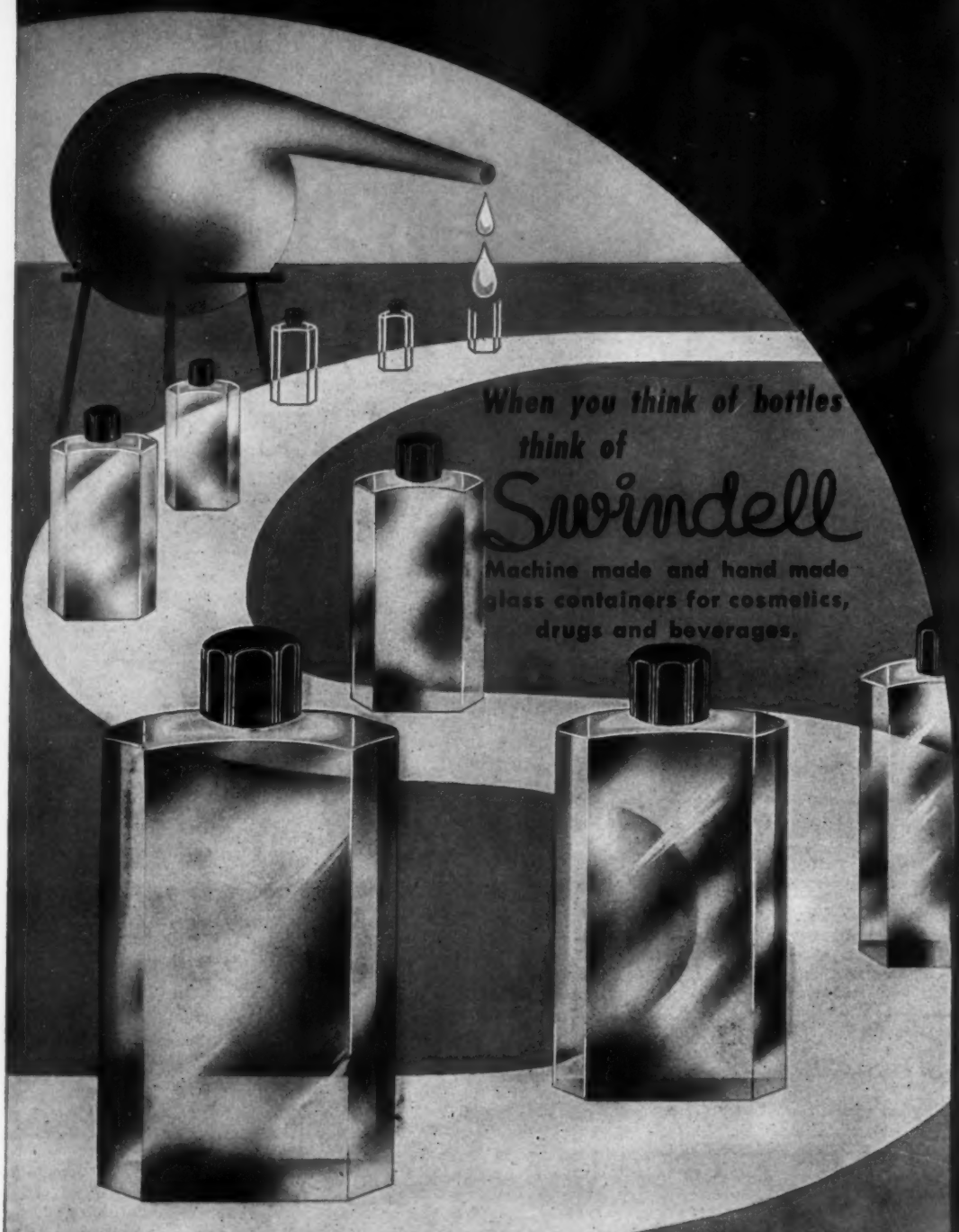
PAPER CUPS AND FOOD CONTAINERS — Mono Containers, Newark, N. J.

COMBINATION PAPER AND METAL CONTAINERS

Headquarters: 330 W. 42d St., New York 18, N.Y.

13 Plants — Sales offices in all principal cities

LOOKING INTO THE FUTURE



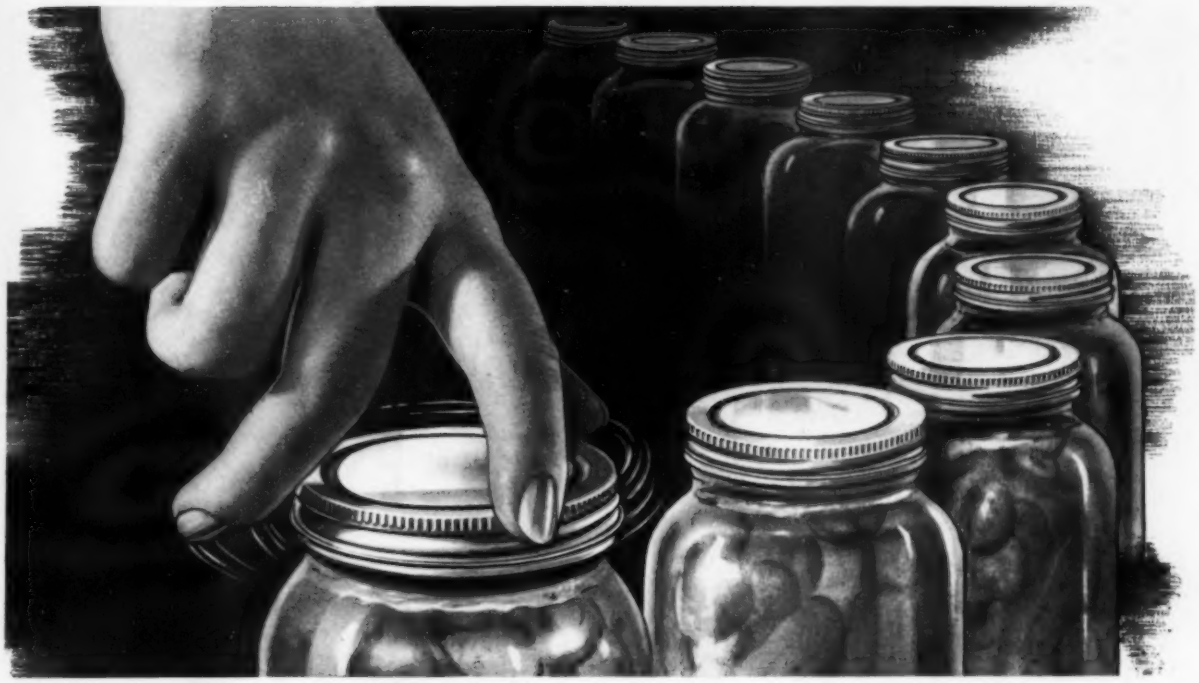
When you think of bottles think of

Swindell

Machine made and hand made glass containers for cosmetics, drugs and beverages.

SWINDELL BROTHERS, Inc. BALTIMORE, MARYLAND

200 FIFTH AVENUE, NEW YORK ROBERTO ORTIZ—HAVANA, CUBA



an *Easy Spin* smooths production

Glass moulds may wear, jar neck dimensions may vary, but closures must *SPIN-ON* if your production costs are to stay in line...and *SPIN-OFF* if your customers are to be pleased.

EASY SPIN, both in your plant and when your product reaches the user, is one of the important features you can count on when your closures are engineered and made by Bernardin.

That is because we have experience gained through three generations of supplying closures to meet most every kind of service.

We believe we can smooth your production with our closures. And we know we can contribute real help if you are up against a knotty closure problem. So why not write or phone for a "get together" in your office or ours.

♦

We would welcome discussions of your problems—if any—by mail or over a pipe in our office or yours. Why not let us be hosts to you and your troubles while we discuss Bernardin service as applied to your problems?

♦

use **BERNARDIN** closures

"For distinguished service"

BERNARDIN Bottle Cap Company · Evansville, Indiana

Since 1881 America's First Manufacturers of Metal Closures

when it comes to Packaging . . .

. . . And when it comes to packaging, discriminating buyers consult Warnercraft. They know they can depend on our experienced designers to construct a package that reflects the quality of the merchandise within . . . a mute but magnetic selling agent.

Beauty, suitability and durability are prime considerations of our craftsmen in meeting the container needs of your product. And constant research keeps them in touch with the latest developments in packaging materials.

Let us help you win public approval of your product . . . let us show you what we have done for others and what we can do for you.

WARNERCRAFT

"THE FINEST WORD IN PACKAGING"

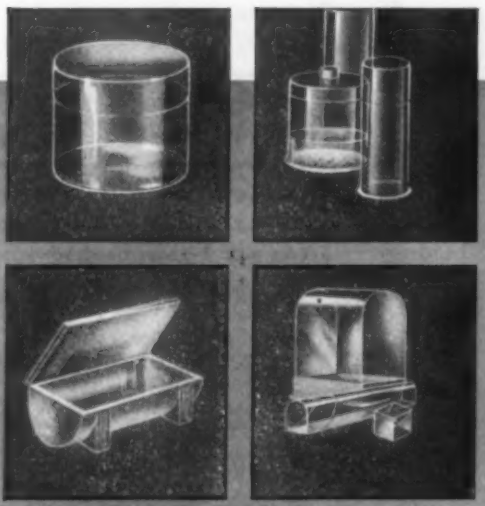
Makers of set-up and folding boxes of all types, transparent acetate containers, hand made specialties, counter displays and dispensers.

THE WARNER BROTHERS COMPANY

Main Office and Factory: 325 Lafayette Street, Bridgeport, Conn.
New York Sales Office: 200 Madison Avenue, New York, N. Y.

that **buying look!**

You've seen it happen—a calculating glint in a customer's eye almost magically transformed to *that buying look!* Invariably a smart package holds the answer. Beautiful plastic containers *attract* attention. They visually *display* the product. They *clinch* the sale by adding a tone of distinction and quality. Look over Ethocel Sheeting and Styron—two leading Dow plastics that may hold *your* answer to better packaging.



STYRON

PRESENT AND POTENTIAL USES: Cosmetic and pharmaceutical boxes and containers of all types: funnels, bottles, closures, food handling equipment. Also used for jewelry, advertising items, refrigerator parts, pens, pencils, chemical apparatus, lenses, decorative objects, trim and other products.

PROPERTIES: Beautiful, clear, translucent or opaque; resistant to acids and alkalies; stable at low temperatures; broad color range; low specific gravity providing more moldings per pound; low water absorption, good dimensional stability.

Ethocel Sheeting

PRESENT AND POTENTIAL USES: Containers of all types, sizes, and shapes for jewelry, cosmetics, and other products. Also used for displays, advertising novelties, greeting cards, envelopes, labels, decalcomanias, records, ice cube trays, lighting fixture covers, lamp shades, and similar products.

PROPERTIES: Combines toughness with flexibility: tensile strength 10,000 lbs. per sq. in.; elongation, 30%; bursting strength (Mullen), 48; folding endurance (lkg; M.I.T.), 4000. Retains these characteristics and transparency over long periods despite handling. Resistant to alkalies and grease. Withstands heat to 220° F. continuous; to 275° F. intermittent. Resists cold. Easily fabricated by drawing, folding and scoring. Can be beaded, printed and joined by adhesives.

THE DOW CHEMICAL COMPANY, MIDLAND, MICHIGAN

New York • Boston • Philadelphia • Washington • Cleveland • Detroit • Chicago
St. Louis • Houston • San Francisco • Los Angeles • Seattle

DOW

PLASTICS

FOR BETTER PACKAGING:
SARAN FILM • ETHOCEL SHEETING • STYRON

Ever figured your shipping costs on tubes?

These examples may give you some idea of the shipping weight you can save by using aluminum tubes

Diameter and Approx. Length	5/8 x 4½	7/8 x 5	1⅛ x 5½	1½ x 7
Approximate Net Weight per Gross	.64 lbs.	1.04 lbs.	1.53 lbs.	3.12 lbs.

You may be surprised when you figure out the shipping costs on the tubes you use in a year. They don't travel for free!

Alcoa Aluminum Tubes will cost you less to ship than tubes made from other metal. Some day when you are in a money-saving frame of mind, figure out just how much money they can save you. Let us know your sizes and we will tell you what they weigh.

Though it may not be possible right now to supply all the Alcoa Aluminum Tubes that are wanted for civilian packaging, we will be glad to talk with you about your future needs. Write ALUMINUM COMPANY OF AMERICA, 1913 Gulf Building, Pittsburgh 19, Pennsylvania.

ALCOA ALUMINUM TUBES

SHATTERPROOF SEAMLESS

Plastic CONTAINERS

ALL COLORS
TRANSPARENT
or
OPAQUE

with OUTSTANDING Advantages

Your label processed during production. These beautifully colored, eye-appealing *plastic* containers survive handling because they are *resilient* They permit product-visibility with shatterproof, seamless protection against either breakage or shop-handling. *They keep new things NEW,* with a style and quality that has long been associated with containers of

Clearsite*

for DRUGS —NOVELTIES—HARDWARE—MACHINE PARTS
INSTRUMENT PARTS—PHARMACEUTICALS—TOOLS
SURGICAL or DENTAL PRODUCTS—DRY CHEMICALS
TOYS —SPORTING GOODS—FINDINGS—COSMETICS —ETC.

* Registered U. S. Pat. Off.

TECHNICAL STAFF and PACKAGE DESIGN ENGINEERS AT YOUR SERVICE

CELLUPLASTIC CORP.

CELLUPLASTIC CORPORATION

PLASTIC CONTAINERS
AND
PLASTIC PRODUCTS

60 AVENUE L NEWARK 5, N. J.

NEW YORK OFFICE—630 FIFTH AVENUE WEST COAST CONTAINER SERVICE COMPANY LOS ANGELES 27 CAL

BRIDGEPORT METAL CONTAINERS

VANITY CASES
ROUGE CASES
PASTE ROUGE CONTAINERS
LIPSTICK HOLDERS (All Types)
POWDER BOX COVERS
EYEBROW PENCIL HOLDERS
BOTTLE CAPS
JAR CAPS
METAL NOVELTIES TO ORDER

THE BRIDGEPORT METAL GOODS MFG. CO.
Established 1909
BRIDGEPORT 'PHONE: BRIDGEPORT 3-3125 CONNECTICUT

Finally!
A DURABLE DECORATING MATERIAL FOR PLASTIC SURFACES...
won't SCRATCH OFF
won't WASH OFF
won't RUB OFF
CREATIVE PRINTMAKERS GROUP 14 W. 17 ST. N.Y.C.
SILK · SCREEN · PRINTERS TO · THE · COSMETICS · TRADE

HERE'S YOUR CHANCE TO TEST VIPACO '6-ACTION' GUMMED TAPE
1. STICKS FASTER!
2. GRIPS STRONGER!
3. SEALS CLEANER!
4. WON'T SIDE SLIP!
5. FOLDS SMOOTHER!
6. ADHERES PERMANENTLY!
Here's the amazing, improved gummed sealing tape that means better, more economical packing and shipping for you. VIPACO "6-Action" gummed tape is stronger, yet less bulky . . . a specially prepared glue gives even overall coverage and won't side-slip . . . unusual flexibility allows for gripping around corners . . . it sticks instantly without added pressure.
VIPACO gummed sealing tape is the answer to many a wrapping problem! It's available in all sizes. *Test it for yourself*—write now for a SAMPLE—no obligation. Prices on request.
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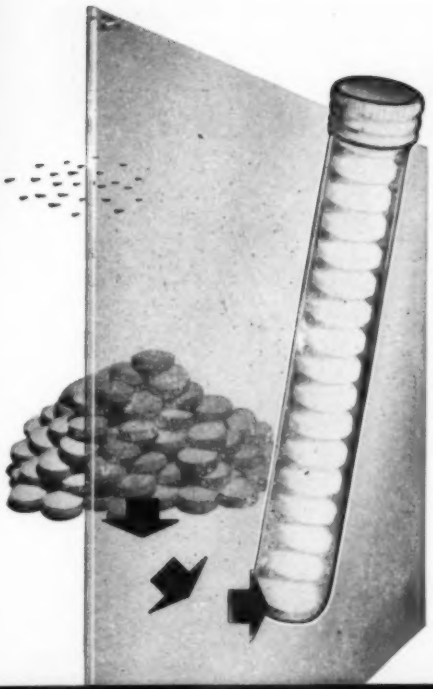

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CHEMICALS INDISPENSABLE TO INDUSTRY AND VICTORY

NEWS...

T. G. A. Scientific Meeting

A meeting of the Scientific Section of the Toilet Goods Association will be held at the Hotel Biltmore, New York, December 6, it has been announced by Dr. Kenneth L. Russell, chairman of the section. This will be the first meeting of the Scientific Section since the spring of 1943.

Bertrand Returns to Owens-Illinois

After nearly a year and a half in Washington on the staff of the War Production Board, Eugene F. Bertrand has returned to Owens-Illinois Glass Co., Toledo, to assume the duties of a position to which he was appointed in absentia.

Last February he was named sales manager for the drug and chemical industries divisions of Owens-Illinois, which include the pharmaceutical and proprietary ware, toilet and cosmetic ware, household and industrial chemical ware, and prescription ware handled through wholesale druggists. Previously Mr. Bertrand was manager of the pharmaceutical and proprietary division.

EUGENE F. BERTRAND

While in Washington, he was chairman of the packaging committee of the War Production Board and assistant director of the Forest Products Bureau.

Brandon Named to Fougera Board

Harry Brandon, president of the Anglo-French Laboratories, Inc. and Pharmaceutical Specialties, Ltd., has been elected a member of the board of directors of E. Fougera & Co., Inc.

Remington Medal to Dr. Rosin

Joseph L. Rosin, vice-president and chemical director of Merck & Co., has been designated as the recipient of the Remington Medal for 1945. The Remington Medal is awarded annually by the New York branch of the American Pharmaceutical Association to the individual who has done the most to promote the interest of pharmacy. Mr. Rosin, an authority on reagents, is the author of "Reagent Chemicals and Standards" and he is in large measure responsible for the excellence of the Merck Index.

JOSEPH ROSIN

Mr. Rosin joined Powers-Weightman-Rosengarten Co. as chief chemist in 1913 and when the firm was absorbed by Merck & Co. he was made vice-president and chemical director of Merck.

The formal award of the Medal will be made late this year in New York.

Stearns Advances Boegly

William J. Boegly has been made divisional vice-president in charge of plant operations of the Frederick Stearns & Co. Division, Sterling Drug, Inc., Detroit.

Mr. Boegly joined Stearns as factory manager in 1943. Since then he has been directing an extensive plant modernization and renovating program for the Detroit plant and laboratories. Prior to joining Stearns he was for twenty-three years with John Wyeth & Brothers, Philadelphia. In 1939 he moved from Philadelphia to Mason, Mich., where he was in charge of construction of the Wyeth plant.

T. E. Caruso Joins Morton Mfg.

Theodore E. Caruso, former head of the research and statistical departments of the Lambert Co. has joined Morton Manufacturing Corp., in an executive capacity.

Long an advocate of ethical advertising and fair trade in the drug industry,

THEODORE E. CARUSO

Mr. Caruso first instituted these practises at the Kolynos Co. in 1925 before the advent of fair trade laws. He was instrumental in merging Kolynos into the American Home Products Corp., becoming president and general manager of the parent firm. Later he was active in the merger of John Wyeth & Brothers, Anacin, Freezone, and Hill's cold tablets with American Home.

In Canada, England and on the continent, Mr. Caruso has been active since 1927 in setting up plants and directing production, sales and advertising of numerous pharmaceutical compounds in conjunction with American Home Products and International Chemical Co., Ltd.

He gathered evidence—a six-year project—to help Lambert win its Listerine antiseptic case with the Federal Trade Commission and since 1940 has been head of the research and statistical departments of Lambert.

In his new capacity with Morton Manufacturing Corp., Mr. Caruso will be engaged on toilet preparations, food specialties and household and medicinal products. The various operating divisions of the Morton company include Chap Stick Co., Snow White Products Co., Whitehouse Chemical Co., Nite Stick Co., Blair of Virginia, and Budwell Pharmacal Co.

Prentiss Moves Offices

The offices of R. J. Prentiss & Co., New York, have been moved to 110 William Street. New telephone number is WOrth 2-6260.

We know a man who lives in a cave. He never saw a bottle. (That's why he has nothing to say.) We can't blame him. He doesn't NEED a bottle. He's a cave man, you see.

Today the cave man is extinct. Men and businesses NEED bottles. There's a shortage of bottles and containers that's not kind to many industries and fields. A good idea would be to contact the Glass Container & Cap Outlet Company. Ten to one you'll be glad to learn of its large quantities (and varieties) of bottles, containers, and caps of all shapes and sizes. And of course, immediate shipments right on the heels of your order!

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Fritzsche Brothers Change Officials

Certain changes in the alignment of official personnel of Fritzsche Brothers, Inc., have been made following the death last July of W. A. R. Welcke, first vice-president and treasurer and a director of the company.

The officers are now as follows: president, F. H. Leonhardt; first vice-president and treasurer, John H. Montgomery; second vice-president and secretary, H. P. Wesemann; third vice-president, Dr. Ernest Guenther; fourth vice-president, J. A. Huisking; manager and director of Clifton Chemical Laboratories, Dr. A. Nicolaus; assistant treasurer, R. R. Redanz; assistant secretary, D. A. Neary; and comptroller, G. Wohlfort.

The board of directors is composed of Messrs. Leonhardt, Montgomery, Wesemann, Huisking and Nicolaus.

Norwich Forms Eaton Laboratories

Norwich Pharmacal Co. has announced the incorporation of a wholly-owned subsidiary, Eaton Laboratories, Inc., Norwich, N. Y. The purpose of the new corporation is "to create and to market, through ethical channels only, preparations which constitute distinct advances in therapeutics."

The group of scientists who now become the research division of Eaton Laboratories has already been functioning as a unit for over four years. This nucleus of a scientific staff comprises 45 specialists; 12 of whom hold the degree of doctor in various sciences.

Officers of the new corporation are: president and general manager, Melvin C. Eaton; vice-president, assistant general manager and chairman of the scientific committee, Howard A. Sumner; secretary and treasurer, J. K. Hill; vice-president and executive medical director, Herbert A. Hartfiel, M.D.; director of organic research, A. B. Scott, Ph.D. Mr. Eaton is also vice-president, general manager and a director of the Norwich Pharmacal Co.; he has served on the legislative committee of the U. S. Chamber of Commerce and on the executive committee of the American Drug Manufacturers Association. The board of directors of Eaton Laboratories is composed of the aforementioned five officers and O. W. Benedict, G. W. Bengert and John Alden.

Distribution of the products of Eaton Laboratories to the drug trade will be via the sales organization of Norwich Pharmacal Co.

Honorary Degree to E. V. Killeen

Edward V. Killeen, of George Lueders & Co., was awarded, on September 27, an honorary degree of Doctor of Laws, by St. John's University, Brooklyn, N. Y. The award was made on the occasion of the diamond jubilee of the university and occurred on the birthday of Mrs. Killeen. Mr. Killeen, long an outstanding Catholic layman of Brooklyn, was awarded an honorary degree of Doctor of Laws by HolyCross College, Worcester, Mass., in 1929, and in the same year he was named a Knight of St. Gregory by the Pope.

Warner Advances Lundquist

H. C. Lundquist, formerly manager of sales operations for the ethical distribution division, has been promoted to general office manager of William R. Warner & Co., Inc., including Schering & Glatz, Inc., Standard Laboratories, Inc., Marcy Laboratories, Inc. and Hudnut Sales Co., Inc.

Mr. Lundquist was formerly associated with the Upjohn Co. where he served for eight and a half years as assistant to the sales manager and later as assistant office manager.

Drs. Lasersohn and Rice Advanced by Winthrop

Promotion of Dr. Martin Lasersohn to vice-president of Winthrop Chemical Co., and of Dr. Justus B. Rice to vice-president in charge of medical research, has been announced by Dr. Theodore G. Klumpp, president.

Dr. Lasersohn, who was assistant to the president, joined Winthrop in 1930, after having served on the faculty of the Medical College of Virginia for six years. He was born in St. Louis and received his B.S. from Washington University and his M.D. from its School of Medicine in 1922.

Dr. Rice was a classmate of Dr. Lasersohn at the Washington Medical School, and has been director of the department of medical research of Winthrop since 1937. From 1932 to 1937, he was with the Rockefeller Foundation, engaged in malaria research in Greece, Egypt and India Prior to that he had been medical director for American companies in Portuguese West Africa and in Liberia and had served in the Panama Canal Zone. Dr. Rice recently returned from a three-month trip to Germany, made under the auspices of the Foreign Economic Administration to obtain for this country information on developments in the field of tropical medicine.

It has also been announced that Lawrence Tiller, executive assistant to the president, has also been elected assistant treasurer of Winthrop. Mr. Tiller was honorably discharged last November as a major in the Chemical Warfare Service of the Army.

Yardley Appoints Straka

Jerome A. Straka has been appointed executive vice-president and a director of Yardley of London, Inc. Prior to joining Yardley, Mr. Straka was vice-president and assistant to the president of Colgate-Palmolive-Peet Co.

MELVIN C. EATON

HOWARD A. SUMNER

HERBERT A. HARTFIEL

New research Laboratories to be built by Winthrop Chemical Co. Inc. at Rensselaer, N. Y.

Winthrop Research Plans

Winthrop Chemical Co. has purchased a 60-acre site at Rensselaer, N. Y., upon which it will construct new research laboratories at a cost of over $2,000,000. Sterling Drug Inc., of which Winthrop is a subsidiary, will utilize the new laboratories to suppl ment the research of its other units, including Frederick Stearns & Co. Division; Hilton-Davis Chemical Co. Division; Winthrop Products, Inc., and Salve Chemical Corp.

The research program will be greatly expanded and a staff of 350 scientists will be employed exclusively on research, as compared with the present 175.

Wyeth Depot in Memphis

A new Wyeth distribution depot was opened by Wyeth, Inc. of Philadelphia, at 480 Union Ave., Memphis, on September 19.

The new depot will be operated under a franchise from Wyeth Inc. by Dr. Bunyan Webb of Memphis. Dr. Webb has named Maurice H. Richardson, who for a number of years managed the Pantaze Drug Store at Union and Main Streets, Memphis, as manager of the distributing depot. Prior to taking over the managership, Mr. Richardson, who is a graduate pharmacist, received special training in depot management and operation at the Wyeth offices in Philadelphia and Atlanta. He will be assisted by a staff of twelve.

Service will be provided by the new branch on a 24-hour schedule for all products including vitamins and the new Wyeth oral penicillin products, Penoral and Amphocillin, which the company has released for national distribution.

Simmons Joins McKesson

Lee H. Simmons has joined the staff of the industrial chemicals division of McKesson & Robbins, Inc. He comes to McKesson from the International Vitamin division of American Home Products Corp., where he was in charge of purchasing. His previous experience included purchasing of materials used in the manufacture and packaging of drugs and cosmetics for R. H. Macy & Co., Inc.

Kent Advanced by Mary Dunhill

Walter J. Kent has been appointed purchasing agent of Mary Dunhill, Inc., succeeding Myron Penn who has resigned. Mr. Kent has been a member of the Dunhill organization for over twenty-three years.

Schering Defends Patent

Award of judgment to Schering Corp., Bloomfield, N. J., in its suit against Jules R. Gilbert and William Bell, as national Synthetics, New York, for infringement of the Schering patent on gallbladder contrast media, was handed down September 21, 1945, in United States District Court for Southern District of New York.

The decision fully upheld Schering's letters patent No. 2,345,384, covering the product Schering sells under the registered trade name "Priodax." The judgment awarded to Schering Corp. included an injunction and restraint against Gilbert and Bell, and National Synthetics. Recovery by Schering of full damages and an accounting of income and profits from infringement were provided for in the judgment.

Smith, Kline Defends Benzedrine

An opinion was handed down September 1, 1945, by the United States District Court for the District of New Jersey in suit brought by Smith, Kline & French Laboratories against Clark & Clark of Camden, Charles L. Morris, et al, for infringement of Letters Patent No. 1,879,003 covering amphetamine sulfate, and for unfair competition.

The opinion of the court fully sustains SKF's patent and finds Clark & Clark, Charles L. Morris, et al, have infringed upon it and have engaged in unfair competition.

Amphetamine sulfate is sold by Smith, Kline & French Laboratories under its registered trade name, "Benzedrine."

New Wyeth distribution depot in Memphis. M. H. Richardson, manager, is at the left.

ADVERTISEMENT—*This entire page is a paid advertisement.* *Prepared Monthly by U. S. Industrial Chemicals, Inc.*

U.S.I. CHEMICAL NEWS

October ★ A Monthly Series for Chemists and Executives of the Solvents and Chemical Consuming Industries ★ 1945

New Alkyd Resin for High-Gloss Baking Enamels

S & W Aroplaz 906 Is Especially Good for Whites

The first of a new line of postwar alkyd resins, S. & W. Aroplaz 906, is now being produced in major quantities for civilian applications, according to a recent announcement by U. S. I. Designed for use with either the ureas or melamines in bake coatings, or in nitrocellulose lacquers, particularly where extreme hardness and good cold-check resistance is desired, this new development is reported to be superior to pre-war alkyds.

Aroplaz 906 facilitates the production of finishes having maximum color retention. It is especially suitable for use in white, domestic-appliance finishes, such as refrigerator, stove and washing-machine enamels. It imparts high gloss characteristics and produces finishes of exceptional hardness and toughness. These finishes have excellent resistance to abrasion, water, alkalis, fats and oils.

Supplies of this new resin are not subject to restriction and are fully available for any application. Samples and additional data may be had on request.

SPECIFICATIONS	
Solution (Xylol with trace of Butanol)	49-51%
Viscosity (G.H.)	P-U
Acid Number (solvent free resin)	6-10
Color (G.H. 1933)	3-5
Wt/gallon at 25° C	8.25-8.35 lbs.

Ether, Acetone Extract Potent New Germicide

Actinomycin A, a powerful germicide found effective in dilutions as attenuated as one part in one hundred million, is particularly effective in inhibiting the growth of gram-positive bacteria.

A recent patent covers a method of extraction from a micro-organism found in soil. The method consists of extracting the culture with ethyl ether or acetone. The solvent is then evaporated, leaving a solid substance which contains Actinomycin A and Actinomycin B.

Indalone Business to Dodge & Olcott

In view of the widespread activities of Dodge & Olcott in the field of insecticides and allied products, U.S.I. has transferred its well known product, Indalone, to this subsidiary company. Indalone is now available for civilian use and all inquiries should be addressed to Dodge & Olcott, Inc., 180 Varick Street, New York, N. Y.

Most Resin Raw Materials Freed; New, Improved Products Appear

Alkyd Resins Now on Market or Under Development Offer Up to 33% Better Drying Rates, Durability and Other Characteristics

With almost breath-taking speed, after Japan surrendered, WPB lifted a majority of the controls on the raw materials used in synthetic resin manufacture and paved the way for the early introduction of many new alkyd resins. These new resins are destined to take great strides in capturing many markets that oleoresinous varnishes held, largely unchallenged, before the war. Although no revolutionary new alkyds have been developed during the war, many are available now, and more will be offered shortly, which are up to one-third better than their prewar counterparts — in speed of dry, durability, color retention, gloss retention and other performance characteristics. Equally important, many manufacturers of protective coatings and other resin-containing products have acquired new and invaluable "know-how" in the use of alkyds as a result of their government business, much of which was based on alkyd resins.

Emulsion paints and coatings have been experiencing a minor boom since before 1941. It is expected that new emulsion resins will shortly be announced which will enable the manufacturer to combine all the advantages of conventional coatings, such as good washability and waterproofness, excellent color retention and exterior durability. Here you see the colloid mill used in U.S.I.'s laboratory in the development of new emulsion resins.

Varnish Resins

Most of the prewar hard resins, the conventional modified phenolics and maleics used in oleoresinous varnish cooks, have, at least temporarily, become obsolete. Newer resins have been developed which are markedly superior in speed of bodying and speed of dry, especially, as now, when soft oils like linseed must be used. When low-cost tung oil is again available in quantity, however, the prewar resins can be expected to stage a comeback, since some types are superior when used with oils like tung.

Oils and Rosin Still Scarce

Despite the critical situation which existed on phthalic anhydride right up until V-J day, this chemical is now freely available. The same applies to phenols, formaldehyde, maleic anhydride, aromatic solvents, etc. However, there is a world-wide shortage of vegetable oils, both drying and non-drying, as a result of the critical need for these oils in food products. This shortage, and consequent gov-

(*Continued on next page*)

Stabilizes Bath Oils

Bath-scenting oils, formulated with alcohol, tend to separate in use, the oils floating to the surface of the bath water in globules. Addition of small quantities of substituted sorbitol or mannitol compounds to the solution, according to a British source, prevents this undesired separation.

Pyrimidines Prepared by Novel Process

Pyrimidines, particularly 2-substituted amino pyrimidine, an important intermediate in the preparation of 2-sulfanilamido pyrimidine, may be prepared in a new and better way, according to the claims made in a new patent assigned to one of the leading pharmaceutical laboratories.

Two methods are described. In the first, a guanidine salt, a beta-alkoxyacrolein acetal, absolute ethanol and hydrogen chloride are mixed under substantially anhydrous conditions. The solvent and excess acid are removed under vacuum, and the residue made strongly alkaline. The 2-amino pyrimidine is extracted with hot benzene.

The second method differs largely in the substitution of beta-ethoxyacrolein diethyl acetal for beta-alkoxyacrolein acetal.

By Ewing Galloway

Harvesting and handling resin- and turpentine-containing pine gum takes a lot of manhours. It takes about two weeks to fill this cup with the "blood" which the pine tree manufactures and sends down beneath the bark to heal the "wound" made by man. Then a new wound must be made.

ADVERTISEMENT—*This entire page is a paid advertisement.*

October ★ **U.S.I. CHEMICAL NEWS** ★ 1945

New Resins Appear

(*Continued from preceding page*)

ernment use-restrictions, seem likely to continue for at least a year.

As for rosin, little hope is seen for breaking the present shortage until April or May of next year, when the new crop starts coming in. Current production is low because of the serious shortage of manpower and the large amount of manual labor involved in tapping trees and gathering the gum. Even if more manpower were available, it would not be practical now to increase the crop because the flow of gum practically stops during November and does not resume until April. In view of this, and the lack of appreciable rosin inventories in the country, little improvement can be expected in the WPB use-limitation on rosin, which, as this is written, is 60 per cent of the base period. This obviously will continue to affect the use of rosin as such, or in the form of synthetic resins.

Natural Resin Situation

Congo gum is the only natural resin of big commercial importance that is available today. Moderate amounts are now being imported from Africa. Other natural resins, such as Damar, Manila and Batu, will probably not be available in quantity for six months or longer. After that, these resins should appear at prices which will make them attractive competitors of some synthetic resins. Further, it is likely that we will see these resins in an improved form — as purified, processed products which will be far more useful than prewar natural resins.

Substitutes with a Future

It was natural to assume that the substitute resins offered during the war would be inferior to the resins they were designed to replace. Such was not always the case. One resin, for example, which turned out to be superior in many respects to the original was S & W Aroplaz 1306. Offered by U.S.I. in 1943 as a civilian replacement for pure alkyd resins of the type used in architectural finishes, Aroplaz 1306 turned out to be almost the equal of the pure alkyd resin in color retention and durability, and far superior to it in initial gloss and gloss retention.

Although a few of these substitute resins may stay on the job, there is every reason to believe that as resin manufacturers apply their vast wartime experience to civilian business, there will be a steady flow of new products with steadily improving characteristics. S & W Aroplaz 906, described elsewhere in this issue of CHEMICAL NEWS, is a splendid example of the kind of progress expected.

New Halide Dispersing Agent for Photo Films

In a recent patent, a process for preparing amino cellulose compounds is described which is said to produce a high molecular weight amine which is water soluble, and in which the cellulose is not degraded.

Formerly, amino cellulose derivatives were prepared with harsh reagents such as caustic alkali. The result was degraded cellulose and a water-insoluble product, both characteristics being undesirable in the preparation of silver halide dispersing photographic emulsions.

In one method described in the patent, 46 parts of cellulose acetate-p-toluene sulfonate was mixed with 300 parts ethanolamine, and the mixture maintained at 50 C for three days. Nearly all the cellulose ester was reacted and dispersed in the ethanolamine. The dope was filtered and precipitated in an excess of absolute ethanol. This precipitate was leached with acetone, then extracted with acetone.

The product was found to be readily soluble in water, and to form an almost colorless, clear viscous dope.

Process Retards Fading of Rayon

Cellulose-acetate rayon fabrics, which are stored in places where coal gas is burned, exhibit a marked tendency to fade. This fading diminishes the value of the fabrics, particularly when it is bolted, as only the exposed edges fade, leaving an uneven color.

A British patent describes a treatment designed to minimize such fading. NN'-diphenylacetamidine is pebble-milled with water and a condensation product of beta-napthalenesulphonic acid and formaldehyde. This dispersion is diluted with water or ethanol, and the cellulose-acetate rayon, dyed with 1:4:5:8-tetraamino-anthraquinone, is immersed in NN'-diphenylacetamidine dispersion.

When treated and untreated samples of fabric were exposed to the action of coal gas for ten hours the untreated sample was faded and dull, while the treated sample had not changed color appreciably.

TECHNICAL DEVELOPMENTS

Further information on these items may be obtained by writing to U.S.I.

New type fabrics for use in clothing, as automobile upholstery, in hosiery, hats and so on, is promised by a new electrostatic coating process. **(No. 984)**

USI

A dry ice liquefier, to transform solid carbon dioxide to the liquid form, is described as having five times the capacity of any other high-pressure liquefier, and to take full sized blocks, thus saving labor of crushing and evaporation losses. **(No. 985)**

USI

A plasticizer extender, for use with cellulose acetate, is said to also improve the heat and light stability and the flexibility of ethylcellulose plastics. **(No. 986)**

USI

Effective mildewproofing is claimed for very low concentrations of a patented organo-mercuric compound. It is specifically intended for bacteriostatic and fungistatic treatment of fabrics, paper, leather and similar products. **(No. 987)**

USI

More compact polarizing microscopes are announced for production within a short time by a leading producer of optical instruments. Changes include new type crystals, which permit the omission of the astigmatizing lens. **(No.988)**

USI

Soldering on aluminum, stainless steel and monel metal is said to be greatly facilitated by a new flux which breaks surface oxides, thus providing more permanent bonds. **(No. 989)**

USI

An insulating paint, designed to reflect light and heat from its bright aluminum surface, is offered for use on roofs. The asphalt content of this paint is said to give it a high degree of water resistance. **(No. 990)**

USI

A plastic upholstery material is claimed to be resistant to moisture, perspiration, crack, wear, acid and alkali, and to be washable. A variety of colors and finishes is available. **(No. 991)**

USI

Metallized glass, which gives a luxurious effect to bottles and similar containers, is suggested as being of particular interest to consumer-goods manufacturers who want to improve the appearance of their packages. **(No. 992)**

USI

A refractory cement, for setting and repairing fire brick, comes in powder form, is thin-mixed on the job, and is described as withstanding high temperatures, as going from 20 to 30 per cent farther, and as being storable without deterioration. **(No. 993)**

USI

A new adhesive, used to adhere acetate sheeting to paper surfaces, is described as a cold water, flexible glue that forms a bond so tight the paper surface will tear before the adhesive separates. **(No. 994)**

USI

Synthetic benzoin, announced as equal to the natural product, and up to 100% pure, is offered in commercial quantities. **(No. 995)**

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Benson Heads N. W. D. A.

Al. B. Benson of Boston was elected president of the National Wholesale Druggists' Association at the organiza-

AL. B. BENSON

tion's annual meeting in New York. Mr. Benson is eastern regional vice-president of McKesson & Robbins.

CHARLES C. CARUSO

Charles C. Caruso, vice-president of Schieffelin & Co., was elected chairman of the association's board of control. He has been a member of the executive committee for the past year.

Smith-Dorsey Advances McMahon

The Smith-Dorsey Co., Lincoln, Nebr., has appointed J. Leo McMahon as sales promotion manager of the company. He has been operating a sales territory for the company for four years in Minneapolis and St. Paul. Mr. McMahon, a graduate of the University of Nebraska Law School, is a former secretary of the State Pharmaceutical Association of Nebraska. For many years he was connected with the Gilmour-Danielson Drug Co. of Lincoln.

Mr. McMahon's territory in St. Paul has been assigned to Frank Stone, and Vincent Duggan, who will soon be released from the Navy, will succeed him in Minneapolis.

H. C. Rorer Succeeds Father

Herbert C. Rorer is the newly elected president of William H. Rorer, Inc., Philadelphia, succeeding his father, the late William H. Rorer, founder and former president, who died August 25. Mr. Rorer who joined the company in 1927 was graduated from Haverford College and took special graduate work at the Philadelphia College of Pharmacy and Science.

Bergmann Joins Harry Broder

Frank Bergmann who has been associated with the Oxzyn Co. for the past twenty-four years has left that organization to join Harry Broder and Associates, New York.

White Joins Florasynth in Chicago

J. Harvey White has joined the staff of Florasynth Laboratories, Inc., in the Chicago region. Mr. White comes to Florasynth from the War Production Board where he was engaged in technical development work and in liaison and co-ordination between the War Production Board, the Army, Navy and Maritime Commission Agencies.

Evans Adds Three Scientists

Eric J. Hewitt, Charles P. Shillaber and Florence E. Wall have joined the staff of Ralph L. Evans Associates, New York.

Dr. Hewitt was formerly director of research for Rare Chemicals, Inc., Flemington, N. J. His experience has included research at the College of Physicians and Surgeons, Columbia University, serving as an instructor at Hunter College and as chief biochemist with National Oil Products Co., Harrison, N. J.

Mr. Shillaber has been a consultant in all branches of microscopy. He is an expert on analytical methods utilizing light, and author of "Photomicrography in Theory and Practice" and of many articles on microscopic techniques and related subjects.

Miss Wall, recently technical editor for the Central Research Laboratory, of General Aniline and Film Corp., Easton, Pa., has been made technical editor, in general charge of information and publications. Her earlier experience was in teaching and chemical industry, and as a consultant, specializing in cosmetics and cosmetology, during which time she lectured on these subjects at New York University.

Baxter and Almroth Join Shellmar

T. R. Baxter has been named package development manager and T. K. Almroth has been named director of public

T. R. BAXTER

relations of Shellmar Products Co., Mt. Vernon, Ohio, and Southgate, Calif., it has been announced by B.

T. K. ALMROTH

W. Martin, president of the company.

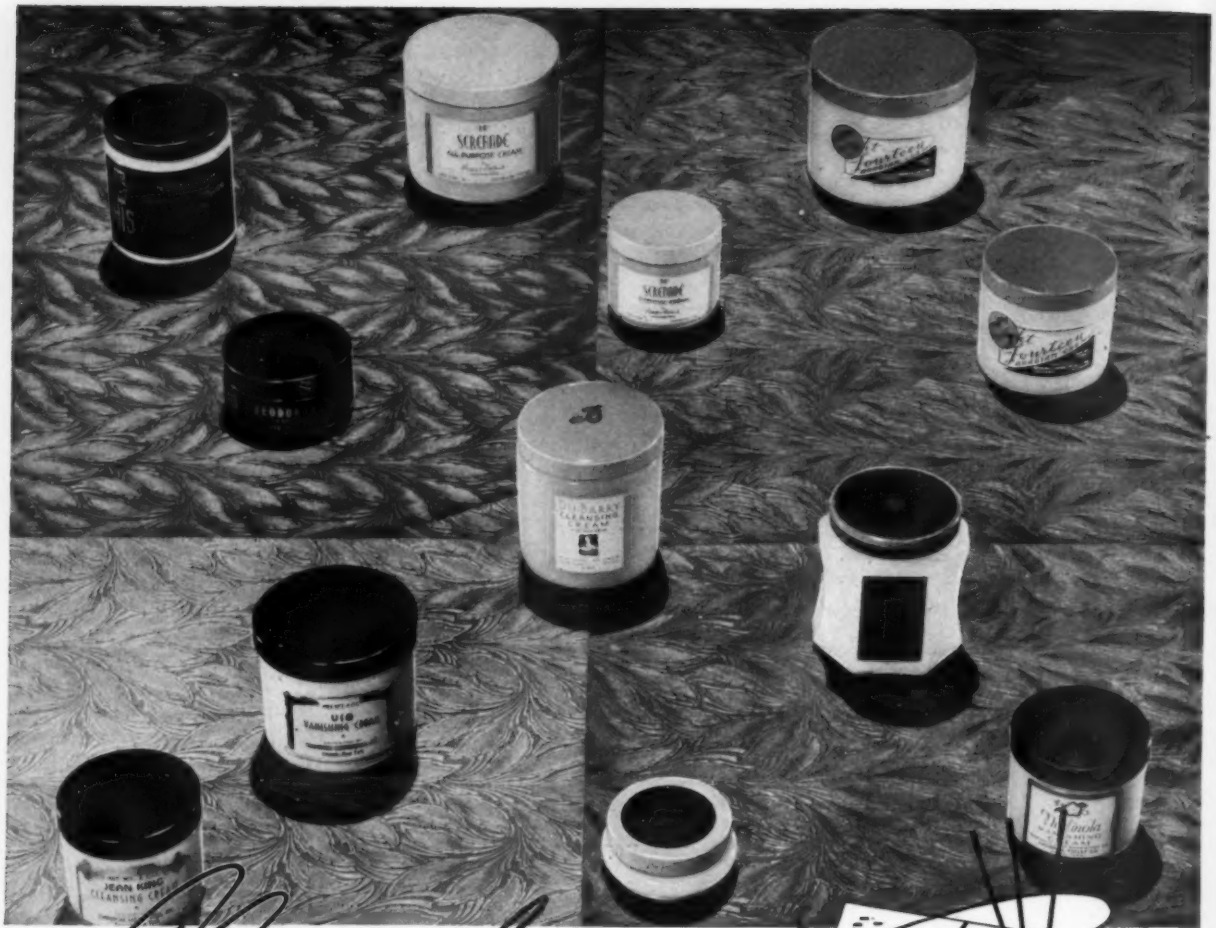
Mr. Baxter had been with Standard Brands in a similar capacity for the past twenty-five years. Mr. Almroth was for more than twenty-five years advertising and publicity manager of Owens-Illinois Glass Co.

Dreyer Appoints Ostroff in Pittsburgh

P. R. Dreyer Inc. has appointed B. Ostroff as its representative in Pittsburgh. He will make his headquarters at 1609 Investment Building, Pittsburgh, 22.

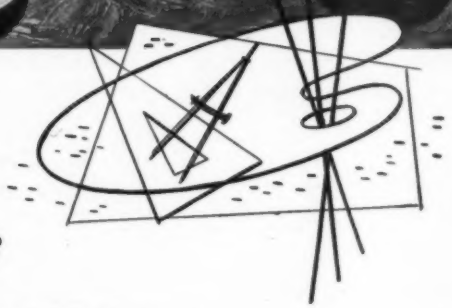
Dr. Rawson Joins Straub Labs.

Dr. George William Rawson has been appointed sales manager of the animal health department, Straub Laboratories Division of the Borden Co. A doctor of veterinary medicine, Dr. Rawson was formerly with Parke, Davis & Co. in charge of the department of parasitology.



Motif

FOR MODERN PACKAGERS



In Meritseal closures, the artist and engineer have joined hands. To Meritseal, the artist has brought beauty . . . and feminine daintiness. It has color . . . bright, sparkling color in every hue, and trim smooth-flowing lines. Meritseal adds a touch of luxury to quality cosmetic packages.

The engineer is responsible for Meritseal's mechanical perfection. Unique, non-binding thread design . . . new principles of construction . . . perfect fitting air-tight seal . . . features that assure dependability and satisfaction . . . and at a cost that interests every profit minded manufacturer.

Try Meritseal on your own product. A request will bring you samples and complete information. Be sure to mention color preference and size of caps that will fit your packages.

CROWN CORK SPECIALTY CORPORATION
DECATUR, ILLINOIS
Division of Crown Cork & Seal Company

MeritSEAL

O'Connor Advanced by Ayerst, McKenna

W. Boyd O'Connor has been promoted to general manager of the American division of Ayerst, McKenna & Harrison, Ltd., pharmaceutical and biological affiliate of American Home Products Corp.

W. BOYD O'CONNOR

Mr. O'Connor joined Ayerst's Canadian sales department in 1931 and became assistant sales manager eight years later. By 1941 he was general sales manager for Canada and last year transferred to the American company as assistant general sales manager, the post he held until his recent advancement.

Burroughs Wellcome Pays Veterans

Burroughs Wellcome & Co. (U.S.A.) Inc. has announced a special vacation allowance plan for returning veterans, based on their pre-induction basic salary rate up to $300 depending on the length of their employment with the company. For veterans who were in the company's employ for from one to six months, the allowance is one week's pay; from six months to a year, entitles him to two week's pay; and for over a year, two week's pay for each summer he was away.

A veteran will be eligible for these benefits after he has been re-employed by the company for ninety days. In the case of an employee who was killed or totally disabled, a check for the maximum amount of $300 will be sent to his dependents, providing he had been in the company's employ for six months.

Jacqueline Cochrane Buys Building

Jacqueline Cochran has purchased the six-story building at 10 West 56 St., New York. Miss Cochran's cosmetic business will occupy the entire building.

Warner Names Farias and Barrett

Remo Farias and L. J. Barrett have been appointed divisional sales managers of William R. Warner & Co., Inc., it has been announced by R. D. Hetterick, general sales manager.

Mr. Farias who becomes sales manager of the New York division has been district manager of the Bronx division of professional field representatives. Before joining Warner he was with the Upjohn Co. as a field representative.

Mr. Barrett, who now takes over the St. Louis division, has been with William R. Warner & Co., Inc. for over four and a half years and has served during that time as professional field representative in the Chicago territory. Before that he was with the Walgreen Agency division for many years.

United-Rexall Names Lane

Thomas H. Lane has been appointed director of sales promotion of the United-Rexall Drug Co. which operates the Liggett, Owl and Sontag stores and services approximately 9,000 independent Rexall drug stores. A graduate of Dartmouth College in 1935, Mr. Lane had previously been director of advertising, press and radio in the War Finance Division of the U. S. Treasury Department.

THOMAS H. LANE

Assoc. Products to Sell Westall Perfumes

Associated Products, Inc., Chicago, is the owner of Evyan Ltd. which has obtained the distribution rights for White Shoulders, Menace, and Gay Diversion perfumes and any other perfumes that may be brought out in the future by the Dr. Langer and Evelyn Westall companies. A separate sales organization, headed by Larry Mott, has been established for Evyan and Madame Huntingford.

Frorer Advanced by Atlas

J. R. Frorer, formerly manager of the Polyalcohol Division, has been appointed general manager of the Industrial Chemicals Department of Atlas Powder Co., Wilmington, Del. He succeeds M. J. Creighton who was elected vice-president. Mr. Frorer started with Atlas in 1920 in the Explosives Manufacturing Division. He transferred from the Explosives Department to the Industrial Chemicals Department in 1935 in charge of sales and also directing operations of the organic chemicals plant at Atlas Point, Del.

J. R. FRORER

Isaac Fogg was elected president of Atlas Powder Co., succeeding Leland Lyon who resigned as president and member of the executive committee, but retains the post of chairman of the board of directors.

Dempsey Named S. & D. Secretary

The board of directors of Sharp & Dohme, Philadelphia, have elected William L. Dempsey secretary of the company in addition to his present duties as executive vice-president.

Monsanto Sales Appointments

Appointment of S. U. Shorey as assistant manager, plasticizers and resins sales, and of B. B. Langton, as assistant manager, intermediates sales, has been announced by Robinson Ord, general sales manager of Monsanto Chemical Co's Organic Chemicals Division.

Mr. Shorey entered Monsanto's service in 1936 and for the past five years has been sales representative for phosphate and organic chemicals divisions' products at Everett, Mass. Mr. Langton started with Monsanto at Everett in 1940 and has been in charge of the company's Washington office since last November. Both will report to C. H. Sommer, manager of plasticizers and intermediate sales, St. Louis.

Rand Named Monsanto President

William McNear Rand has been elected president of Monsanto Chemical Co., succeeding Charles Belknap, who will continue with the company as chairman of its executive committee.

In announcing Mr. Rand's election, Edgar M. Queeny, chairman of the board, said that Mr. Belknap has agreed to extend his service beyond the normal retirement date as executive committee chairman and board member at the request of the board of directors.

WILLIAM M. RAND

Mr. Rand has been a Monsanto vice-president for the last eight years and since 1943, when he became a member of the executive committee, has made his headquarters in St. Louis.

A native of Watertown, Mass., and a graduate of Harvard University, Mr. Rand entered the organization in 1921 through the Merrimac Chemical Co., Everett, Mass., serving successively as treasurer, sales vice-president and treasurer, executive vice-president and president. Merrimac was acquired by Monsanto in 1929, liquidated as a separate corporation in 1937, and thereafter operated as Monsanto's Merrimac Division. With this change Mr. Rand was made general manager of the division and vice-president of Monsanto, continuing as such until his transfer to St. Louis.

Lederle Absorbs Jobless

More than fifty per cent of the personnel in the blood plasma unit of Lederle Laboratories, Inc., Pearl River, N. Y., who were left jobless with the sudden ending of the war, were absorbed into other departments in the plant without the necessity of releasing anyone.

The company was confident that it would be as successful in absorbing the remaining personnel when the work of the plasma unit ceased completely

Drug Luncheons Hold Radio Quiz

On September 27 the radio program "Quiz of Two Cities", sponsored by the Lambert Pharmacal Co. was between the Chicago Drug and Chemical Association and the St. Louis Drug and Chemical group. The quiz was conducted by direct wire between the two club teams at simultaneous luncheons held in St. Louis and Chicago.

The Chicago team was composed of Harry Dunning, Albert Verley & Co.; M. F. Charley, Standard Pharmacal, Joseph Sullivan, Du Pont; F. Dean Hildebrandt, McKesson & Robbins; with Charles Drum of Owens-Illinois and John Scott of Merck & Co. as alternates.

The St. Louis team was composed of Robinson Ord, Monsanto Chemical Co.; G. C. Bradshaw, Mallinckrodt Chemical Works; Franc Barada, Fritzsche Brothers. Inc.; and R. S. Reamer, William R. Warner & Co., Inc.; with H. L. Dahm of G. S. Robbins and Morton Meyer of Thompson-Hayward as alternates.

Helen Martin Joins Colgate

Helen Martin has joined Colgate-Palmolive-Peet Co. as cosmetic consultant under Gilbert D. Miles in the new products department.

Miss Hammon Joins Hudnut

Marion Hammon has been made director of product publicity by the Hudnut Sales Co., it has been announced by C. A. Pennock, president. For the past eight years Miss Hammon has been beauty editor of Macfadden Women's Group

Phila. Drug Golf Outing

The Philadelphia Drug Exchange held its annual fall outing October 2 at the Cedarbrook Country Club, Philadelphia. Golf was played in the afternoon and dinner was followed by an entertainment and the awarding of prizes.

BIMS of Boston Golf

The BIMS of Boston held its last outing of the 1945 season September 26 at the Nashua Country Club in New Hampshire. The attendance was the largest in the history of the Boston organization, whose membership has increased more than 100 per cent since Pete Niles, manager of the New England branch of Fritzsche Brothers, Inc., took over the chairmanship in 1943.

Crowley Joins Parfait

James Crowley has been appointed director of sales promotion and advertising of Parfait Sales, Chicago, it has been announced by Albert H. Newman, president. Mr. Crowley was formerly with Helena Rubinstein, Inc., and Stern Bros. of New York.

Krauss Returns to Business

Richard M. Krauss, Jr., who served as a master sergeant in the U. S. Army for thirty-five months has resumed his duties with Richard M. Krause, Inc. He has been elected a vice-president.

Sterling Drug Opens in Atlanta

A new sales and distribution branch will be opened by Sterling Drug Inc. in Atlanta, Ga., on January 2, 1946.

F. J. Stanton (center), president of Lynette Perfumes was host at a dinner at the Waldorf-Astoria, September 19. F. V. Sinclair, publisher of DRUG & COSMETIC INDUSTRY, is on Mr. Stanton's right and Mrs. Sinclair on his left.

Three important factors• in the making of products for intravenous injection

- *A fine chemical of measured purity*
- *Your technical skill in manufacturing*
- *Rigid laboratory control in your plant*

Few medicinal products demand as high a degree of purity as that required for products used in intravenous injection.

Upon the absolute *purity* of the intravenous solution, a life may depend.

That is the reason pharmaceutical houses use *extraordinary care* in the making of such products.

In that making, are these three vital factors:

– Selection of a fine chemical known for its purity and uniform quality.

– Extreme care in preparing the intravenous material—in bringing the solution to proper strength, clarifying it, introducing and sealing it into the ampule.

– Maintenance of rigid laboratory control throughout the manufacturing procedure.

The first of these three factors is highly important to manufacturers of *many* types of pharmaceutical products, but *it is even more important to those who produce products for intravenous injections.*

Here, purity to the decimal must be selected *at the beginning.* Your product depends upon that, and your manufacturing job is easier all the way.

Measured purity is the foundation upon which Baker has built its service for you. For many years, leading pharmaceutical and drug companies have known, and bought, Baker's fine chemicals (purity by the ton).

No matter what product you manufacture—if it requires one or more fine chemicals, specify Baker and you'll specify quality *at the beginning.*

J. T. Baker Chemical Co., *Executive Offices and Plant:* Phillipsburg, N. J.; *Branch Offices:* New York, Philadelphia and Chicago

Baker's

FINE CHEMICALS

BEAUTY PROGRESS

An example of early cosmetic advertising...this tile sign that hung outside an American Apothecary Shop, probably about 1870.

BEHIND locked doors, the glamour girls of another day experimented with strange concoctions of milk, vinegar and the juice of the pear to whiten their skins . . . because cosmetics were frowned upon by the Pilgrim fathers! Even the threat of "being brought up in meeting" could not stifle woman's natural urge to beautify herself.

Today's woman has science to help her in her search for beauty. Modern cosmetics are not blended by a formula based on wishful thinking, but on scientific laboratory research. She is protected by laws, not *forbidding* the use of a cosmetic, but *insuring* that its ingredients are harmless, even that they are as beneficial as they claim to be.

The cosmetics of the future afford infinite possibilities of improvement as research, speeded by wartime necessity, has opened new vistas to us. When production restrictions are lifted, new formulas, new materials, will be available for civilian production and we at Allied will be prepared to adapt them to the improvement of YOUR product.

ALLIED PRODUCTS INC.

30 ROCKEFELLER PLAZA, N. Y. C.

Private Brand Specialists • Makers of the World's Finest Cosmetics and Toiletries

Plant and Laboratories • Saffern, New York • Middletown, New York • 1010 St. Alexander St., Montreal, Quebec

Bouillette Resident in New York

Pierre Bouillette, associated with Compania Gessy Industrial, Sao Paulo, Brazil, is in this country and has established residence in New York.

J. S. Heuisler Heads Maryland Glass

J. Stanley Heuisler, former executive vice-president has been elected president and chairman of the executive committee of the Maryland Glass Corp. He has been with the company for over twenty years. Philip I. Heuisler, Jr., the new executive vice-president who has been with the company for fifteen years, will continue as general manager.

Murphy—Fries

Jeanne Cecile Fries, daughter of Mr. and Mrs. George G. Fries, was married September 12 to Lieutenant Robert Francis Murphy of the Army of the United States.

Askin Named Asst. Sec. of Heyden

S. Askin, industrial relations director of Heyden Chemical Corp., New York, has also been appointed assistant secretary of the company.

S. ASKIN

Bodman Honored by Friends

Fenimore L. Bodman of Philadelphia was entertained by a group of his old friends at an anniversary party in his honor September 29 at the Philadelphia Art Alliance.

Guests who were present at the old-fashioned surprise party were: Mrs. Fenimore L. Bodman; Mr. and Mrs. Warren H. Bodman; Capt. and Mrs. Philip C. Burnham, Jr.; George H. Kinsey of H. J. Baker & Bro.; Frederick Dehls, and Robert S. Cochran, of the Benzol Co.; M. H. McAllister, J. H. Whittington, E. O. Frei and E. A. Froetscher of F. W. Berk & Co., Inc.; Herman Meyer, Hormogano Corp.; C. J. A. Fitzsimmons, and Arthur P. Hafner, Orbis Products Co.; A. J. Jewell, Schuylkill Chemical Co.; Bernhardt Mosler of Frankford Grocery Co. and Mrs. Mosler; Mrs. Gerald C. Smith and Miss Christine M. Mosler.

Bell of Evans to England

Alan B. Bell, technical director of Evans Chemicals, Ltd., arrived in New York from England September 19 for an extended visit with Evans Chemetics, Inc., New York.

Baker Advances Nelson

Gerald P. Nelson has been made manager of the Philadelphia office of J. T. Baker Chemical Co., Phillipsburg, N. J.

GERALD P. NELSON

Mr. Nelson started in the Philadelphia territory in 1938, leaving in 1943 to assume duties as a captain in the Army Transportation Service.

Ogden Returns to Dunhill

Major Stephen A. Ogden has been reelected executive vice-president of both Alfred Dunhill of London, Inc., and Mary Dunhill, Inc., New York. Major Ogden returns to the Dunhill organization after three years in the Army Air Corps.

Bjorksten Labs. Expand

Bjorksten Laboratories, Chicago, has leased 1,000 square feet of space in a fireproof building at 13791 South Avenue "O", Chicago. This is in addition to the quarters occupied at 185 West Wabash Ave., where the organization will continue to have its main office.

It has also been announced that Kenneth Sutherland has joined the staff of Bjorksten Laboratories as a chemist. He was previously associated with Turco Products, Inc.

Haag Retires From Searle

Charles M. Haag, New York branch manager of G. D. Searle & Co., retired September 15 at the age of 70 after eighteen years' service as divisional and branch manager of the company. He had been connected with the Searle company since 1927 and had been in

CHARLES M. HAAG

charge of the New York branch since September, 1941. Prior to that he had served as divisional manager in charge of the company's Kansas City and San Francisco branches.

He entered pharmacy fifty years ago as a clerk in a drug store in Toledo, Ohio, and later managed drug stores in Toledo and Columbus before becoming sales representative of leading concerns in the tobacco and pharmaceutical industries.

Quinn Goes South for Mathieson

Robert J. Quinn, assistant to the vice-president and director of sales of the Mathieson Alkali Works, is leaving the company's New York executive offices to undertake an important new sales assignment for the company in its southeastern territory.

Monsanto's Plastics Council

An advisory group, known as the Plastics Technical Council, has been formed by Monsanto Chemical Company's Plastics Division, Springfield, Mass., to assist manufacturers in using plastics, entirely without obligation.

Membership of the board now established includes E. S. Bauer, F. J. Donohue, Dr. K. Bump, R. R. Cook, C. L. Jones, W. A. Lang, T. S. Lawton, J. Lurie, R. G. O'Kane, and D. S. Plumb.

A booklet explaining the purposes of the committee and its method of operation is available to manufacturers upon request to Monsanto's Plastics Division. Springfield 2, Mass.

WE'RE PROUD *of these customers!*

WE'RE proud of these companies we service, for with every packaging job Trans-Pac does for them goes their confidence and respect for our ability as creative packagers. Can't really blame us for being as proud as punch about all this, when you stop to figure that many of our clients are leaders in their fields. That they are stringent and unyielding in wanting only the best packaging for their particular products.

Soon many new and superior packaging materials will be available. Whether it's pliofilm or glassine lamination, we can plan your package needs now. In addition to our own staff, we also cooperate with the engineering and research divisions of the leading manufacturers of packaging supplies. This "plus service" is without cost to you.

Our long experience dealing with diversified products enables us to turn out the best in present-day packaging. Post-war packaging plans, however, can formulate only as soon as facilities are available. Until that time, we should be pleased to advise you on your packaging requirements.

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CAMPBELL'S SOUP CO.
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THE ANACIN CO. "WHITEHALL"
CARTER PRODUCTS, INC.
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DR. D. JAYNE & SON, INC.

TRANS-PAC SERVICES, INC.

602 WEST 52ND STREET, NEW YORK 19, N. Y.

Apex Buys K. & S. Equipment

Apex Chemical Co., Elizabeth, N. J., has purchased all installations, equipment and laboratories of the K. & S. Chemical Co., formerly at 44 Cliff St., New York, manufacturer of fine chemicals, drugs and pharmaceuticals. The equipment has been installed in Elizabeth and the manufacture of these organic synthetics on a commercial basis is now under way.

Sidney M. Weinstein, director of research, and Dr. Philip Levine, head of the organic division have been assigned to the development and production of these organicals.

Arthur Regan, chemical engineer, has joined Apex as assistant to the production manager, Charles L. Coble. Mr. Regan was formerly assistant to Dr. James Bradley of the Newark College of Engineering. A. Seldner has been appointed to Apex's organic chemical staff where he will assist Dr. Levine. Mr. Seldner was formerly associated with the Trubek Laboratories and the Ciba Pharmaceutical Co.

New Bayer Aspirin Plant

Work has been started on the construction of a new aspirin manufacturing plant at Trenton, N. J., inaugurating a $6,000,000 building program of Sterling Drug Inc. Costing $1,600,000 the new structure represents the first of seven projects for expansion of laboratory and manufacturing facilities in the United States and abroad. Its four building units will connect with the present plant of the Bayer Co. Division, 2144 East State St., Trenton, and raise to 200,000 square feet the floor space devoted to aspirin manufacture, and permit an employment increase in excess of 100 per cent.

Retirement Plan

The board of directors of Burroughs Wellcome & Co. (U.S.A.) Inc. has adopted a retirement plan for the benefit of all persons regularly employed by the company who are over twenty-five years of age. It will supplement the benefits of the Social Security Act and so provide more adequate incomes for those who retire. It also provides disability benefits for employees who become disabled before reaching the age of sixty-five.

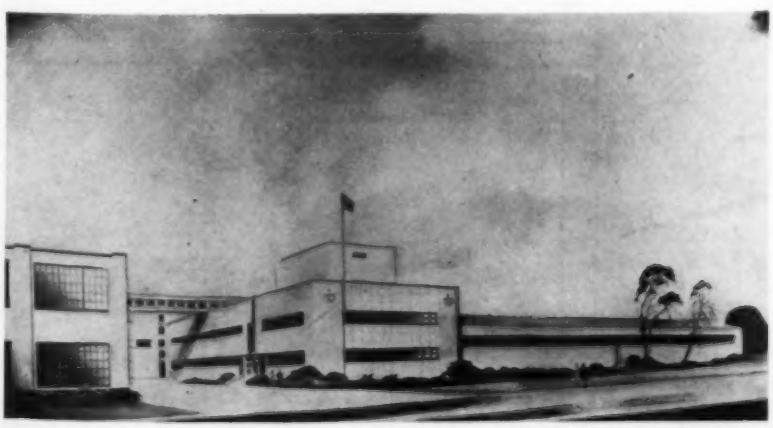
Warner Goes to 35 hr. Week

A 35-hour, 5-day work week has been adopted for all office employees of William R. Warner & Co., Inc., including Schering & Glatz, Inc., Standard Laboratories, Inc., Marcy Laboratories, Inc. and Richard Hudnut. There will be no reduction in salary and the usual overtime rates of time and one-half for additional work will prevail.

Dr. H. O. Calvary

Dr. Herbert O. Calvary, chief of the Division of Pharmacology of the Food and Drug Administration, died suddenly at his home in Washington, September 23. He was forty-seven years old.

Dr. Calvary went to Washington in 1935 to assist in the organization of the division and became its chief in October, 1936. He attended Greenville College and the University of Illinois and before entering the government service taught at the University of Louisville, Johns Hopkins and the University of Michigan. During the war he concerned himself chiefly with antimalarials, DDT, war gases, and chemical venereal prophylactics.



New aspirin plant at Trenton, N. J. being erected by Sterling Drug Inc.

Dr. J. H. Beal

James Hartley Beal, D.Sc. died a his home in Fort Walton, Fla., September 23 at the age of eighty-four.

Dr. Beal was born in New Philadelphia, Ohio, and attended Buchtel College in Ohio while apprenticed in pharmacy. In 1884 he was graduated from Scio College, Ohio, and in 1886 from the Cincinnati Law School. The following year he established the Scio College of Pharmacy and was its dean for many years. This was later merged with the Pittsburgh College of Pharmacy, now part of the University of Pittsburgh.

Dr. Beal retired as chairman of the board of trustees of the United States Pharmacopoeia in 1940 after fifty years' service, thirty as chairman. He was general secretary of the American Pharmaceutical Association some thirty years ago and the first editor of its *Journal*. He was the first recipient of the Remington Medal from the New York A. Ph. A. section and one of the organizers of the National Drug Trade Conference. He figured prominently in the enactment of the Federal Food and Drug Law and the Harrison anti-narcotic act.

Dr. Beal was a member of the Ohio legislature. He was prominent in the Ohio Pharmaceutical Association, an active member of the American Chemical Society and a fellow of the American Association for the Advancement of Science. He was a former president of the American Conference of Pharmaceutical Faculties.

Lieut. James D. Lynch

Lieut. James D. Lynch, 25, on military leave as associate editor of Monsanto Chemical Company publications, died of malnutrition in a Japanese prison camp, February 5.

His death is believed to have occurred at the Fukuoka camp on the Japanese home island of Honshu, to which he was apparently transferred only a few weeks before Allied forces invaded the Phillipines. He had been taken prisoner with the fall of Bataan in April, 1942.

In a letter written by Lieut. Lynch December 15, he said he expected to leave Manila Bay by a Japanese prison ship the next day for Japan. It was on the following day that Allied planes inadvertently bombed Jap prison ships off the coast of the Phillipines. This suggests that he may have been one of the few surviving prisoners.

How about your Post-war Rouge Boxes?

They'll be largely made of Plastics, of course. American women would see to that even if economy and colorful sales appeal didn't make Plastics a natural from your viewpoint anyway. Women are sold on the feel, and brilliance, and cleanliness of Plastics.

But the rush is going to be terrific! As one of the oldest and largest molders of closures, lipstick holders and containers for all types of cosmetics, we know. So let's talk things over now. Then, when things open up, you can be sure of the type of service that has made Kurz-Kasch a leader in the Plastic cosmetic packaging field.

● Cosmetic packaging has been a specialty of ours ever since we originated the screw-top Plastic Rouge Box. Inquire about either stock or custom molds for all types of containers . . . for cream rouge, dry rouge, mascara, face powder or lipstick. No obligation.

Put your dollars in the fight — **BUY WAR BONDS!**

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For over 25 years Planners and Molders in Plastics

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No rabbits up our sleeves. Good management, fine labels, low prices and cordial customer relations keep us out front. That's why we can still offer you values like this: the biggest dollar's worth in America.

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CONSOLIDATED OFFERS

1—World automatic Straightaway Labeller.
1—90 gal. stainless steel jack. Kettle.
1—No. 5 Sweetland Filter, 20 copper leaves.
1—Stokes Auger type Powder Filler.
1—Semi-automatic Labeling Machine.
5—Dry Powder Mixers, up to 2000 lbs.
20—Aluminum, Copper, Glass Lined, jacketed and agitated Kettles.
1—Abbe Blutergess Sifter No. 2.
2—Colton No. 3 Toggle Presses.
3—Stokes Steam Water Stills, 5, 10, 25 gal. per hour.

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ATLAS
Emulsifiers *and* Dispersing Agents *Are Again Available*

Atlas surface active agents—emulsifiers, solubilizers, wetting and dispersing agents—are again available to drug and cosmetic manufacturers. Unavailable during the war for "non-essential" end use, their electrolyte-stability, great water-holding power and wide adaptability have returned to help in the production of richer, more stable emulsions.

ATLAS ARLACEL C

High quality emollient and emulsifier for water-in-oil preparations. May be used as an auxiliary emulsifier in oil-in-water emulsions. It permits hot-pour packing of stearic acid type O/W creams.

ATLAS G-1165

Water-in-oil emulsifier with high water-holding power. Its low viscosity favors its use in fluid W/O emulsions, such as emulsified hair dressings.

ATLAS TWEEN 20 and ATLAS G-2160

Dispersing or solubilizing agents for perfume and essential oils. Used in preparing clear colognes with the minimum amount of alcohol, and cream colognes.

ATLAS SPAN 60
ATLAS SPAN 80
ATLAS TWEEN 60
ATLAS TWEEN 80

Emulsifiers for oil-in-water type creams; such as hand creams, face creams, etc.

ATLAS SPAN 60

Acts as a thickening or bodying agent for oil-in-water type emulsions.

ATLAS G-2160
ATLAS G-2151
ATLAS G-2152
ATLAS G-2153

Emulsifiers for oil-in-water antiperspirant creams. Stable to electrolytes.

We will be glad to consult with you on the use of Atlas surface active agents in your products. To get started, write for literature and samples, today.

Arlex, Arlacel, Span and Tween: Reg. U. S. Pat. Off.

Manufacturers of Arlex (Atlas Commercial Sorbitol Solution)—humectant, conditioner and moisture content stabilizer for drug and cosmetic creams, lotions and ointments.

ATLAS INDUSTRIAL CHEMICALS DEPARTMENT

CHEMICALS ATLAS EXPLOSIVES

ATLAS POWDER COMPANY, Wilmington 99, Del. • *Offices in principal cities* • *Cable Address—Atpowco*

Higher Speed

the modern way to NEW SAVINGS

We are constantly bringing new savings to manufacturers by providing faster wrapping machines for their products.

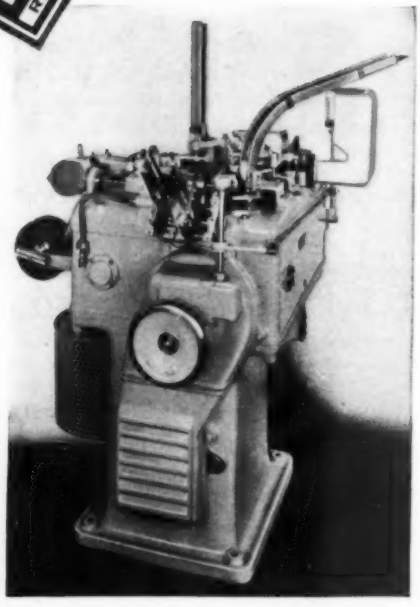
This modern razor-blade wrapping machine is a good example. It encloses the blades in an inner and outer wrapper at a speed of 150 blades per minute. That's twice the speed of former wrapping machines—and one reason why so many blade manufacturers are ordering this new model.

Inner wrapper of waxed paper is fed from a roll and punched out with a die. The outer printed wrapper, previously die-cut, is fed from a magazine. Both wrappers are completely folded over the blade at the same time—a fact which contributes to the speed of the wrapping. Blades are fed from a magazine and are so handled that no part of the machine touches the cutting edges. Only one operator is required.

High speed wrapping for many types of products

Where wrapping perfection must be attained at high speed, there you will find machines of the Package Machinery Company doing the job. 80% of America's machine wrapped goods pass through these machines—tape bandage, headache powders, tooth brushes, packages of cough drops, hypodermic needles, dental burs, surgical silk, etc., as well as many varieties of medicine and cosmetics.

For new savings, and a better-selling package, consult our nearest office.



WRAPS 150
blades per minute

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PACKAGE MACHINERY COMPANY

Over a Quarter Billion Packages per day are wrapped on our Machines

Production Forum

By Francis Chilson

Industrial Consultant

Dust Collecting

As labor intensifies its demands for better working conditions, more emphasis will be placed on thorough dust collecting. There is no reason under heaven why any man should be forced to work in an environment which forces him to breathe any kind of dust. It is the workman's right to demand a dust free atmosphere, and mark my words, the time is coming soon when he will.

Dust collection is easy. All that is necessary is to move a sufficient volume of air at a velocity fast enough to prevent the dust from settling.

Hitherto, in the trade—and in most places still today—dust is not collected; it is partitioned off to isolate it and devil take the poor slobs who must work in the partitioned areas!

Partitions are used not only to isolate dust but to isolate it according to colors!

Generally, in the drug trade, "dust contamination" means getting some dark specks into light colored powders or tablets. Hence, the tendency to partition off "white work" and "dark work." It's perfectly all right apparently for white powders to contaminate white powders, and black black; it's also acceptable to contaminate dark with white, because in all these cases the contamination cannot be seen!

Isn't that a hell of a way to think even by implication or practice?

When I proposed to a prominent manufacturer that the white and dark granulating rooms be consolidated in one big open room with plenty of dust collecting equipment, he was horrified. He hollered bloody murder about the danger of contamination. I pointed out that invisible contamination was taking place all the time in each of the granulating rooms. The thing to do I maintained was to prevent contamination by shrouding each product as it is made within a properly designed dust hood. I further pointed out it was actually dangerous to group tablet making operations by color because of the danger of getting the products mixed up.

That was shortly before the unfortunate Winthrop incident where phenobarbital and sulfanilamide were accidentally mixed up. It wouldn't have happened if tablets of two different colors were being made side by side.

At Grove and at Norwich where I first followed the open granulating room method, there never has been any contaminations or mix-ups.

But to operate an open powder or granulating department, at every piece of dust making equipment and at every point where powder is transferred, there must be a high velocity dust hood enclosed on three sides.

The hoods and equipment must be so placed as to be free from draught interference from open doors and windows. Obviously, if a strong wind is blowing in through a window, the amount of moving air will be several times greater than the amount being exhausted through the hood, hence, the dust will not be collected but will be blown all over the room.

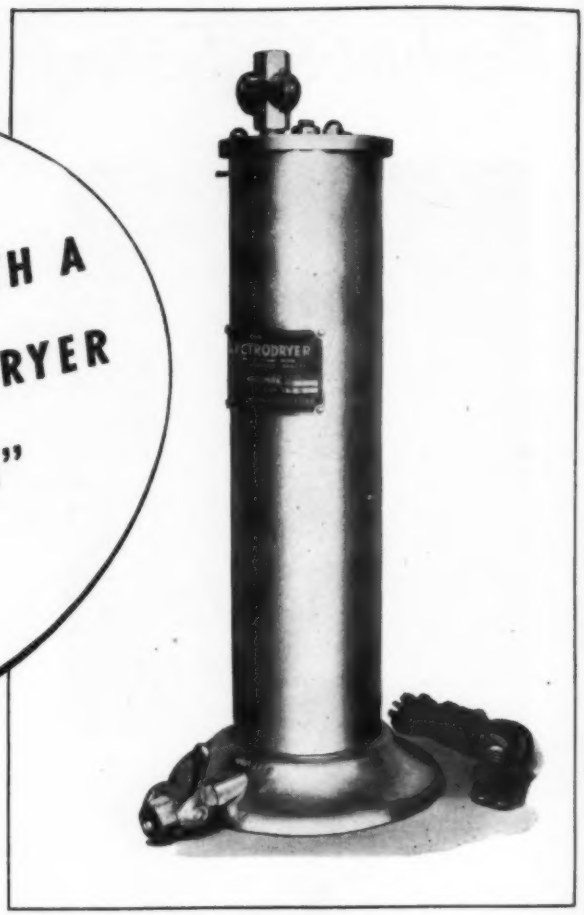
This very situation I see all over the trade and people grouse because their dust hoods don't get all the dust!

Many dust exhaust systems fail to work simply because not enough air is being moved into them. You've simply got to maintain a negative pressure within the hood and the volume of air moved into the hood must overcome all eddy currents and minor draughts around equipment.

To do this, I have found that a minimum velocity of 2500 f.p.m. is required. If the equipment is near doors and windows, double it. For most applications 250 to 500 cfm for each intake will be required.

Volume is determined by the capacity of the fan; velocity by the design of the hood. If, for example, you have a 500 cfm fan pulling against a hood with an open face area of 500 square inches, the velocity will be 1 cfm per inch per minute or in other words, the velocity would be 1728 fpm. This is altogether too slow and you wouldn't pick up all the dust.

Now, if you change the design of the hood and use a double shell or a baffle so as to reduce the open area to a slot two inches wide around the periphery of the hood, the open area in a 25 x 20 hood will be reduced to 172 sq. in. and the velocity of the hood will be 2.9 cubic feet per square inch per minute, or simply, the velocity of the hood will be roughly 5200 f.p.m.



A true story of a man who came to Lectrodryer for DRYing help.

A supersecret device required superdrying in its production. The manufacturer came to Lectrodryer with his problem—

"What kind of drying machine do we need? How many air changes will be needed to produce that dryness? What air agitation will be required?" And then came the $64 question: "How soon can we get the Lectrodryer that will do that job?"

Today, that plant is actually in limited production with the help of a Laboratory Lectrodryer. The production-size machine is being built.

Lectrodryer welcomes men with DRYing problems. For such help, write PITTSBURGH LECTRODRYER CORPORATION, 309 32nd Street, Pittsburgh 30, Pennsylvania.

In England: Birmingham Electric Furnaces, Ltd., Tyburn Road, Erdington, Birmingham.
In Australia: Birmingham Electric Furnaces, Ltd., 51 Parramatta Road, Glebe, Sidney.

LECTRODRYERS DRY WITH ACTIVATED ALUMINAS

PITTSBURGH
LECTRODRYER
CORPORATION

Reg. U.S. Pat. Off.

Judgment must be exercised in designing the dust collecting system or it will be too big and cumbersome, and it will exhaust so much air from the room that it will be impossible to keep the area heated.

If you decide on using 500 cfm per intake in an area having twenty intakes you'd have to exhaust 10,000 cfm. But, generally speaking, not more than half the intakes would be in use at one time and the fan sizes could be reduced accordingly.

Dust collecting units should be mobile, but so far, I have not had any luck with portable units. Either the fan size is too small or the air relief unit is too small and soon clogs up.

One way to design a system to keep the size of the fans and the exhaust ducts down, would be to use portable fans which could be attached to the hoods whenever in use and to the exhaust duct. In this way you could, not only keep the size of the exhaust duct down, but you could use a single dust collector and it, too, could be smaller than is required for an entire set up.

Just remember dust can all be collected if you move enough air fast enough. If all dusts were poisonous, enough to kill our people, there's no question but that we'd collect the dust—all of it.

I don't care what your kind of dust is; it can be collected: rouge dust, face powder dust, drug dust, chemical dust.

You may lose a little material but what is this compared with your worker's comfort and efficiency? What does this amount to when real dust collection assures your customers of a contamination free product?

A rough test of a good dust hood is to stand four feet in front of the exhaust hood and exhale some cigarette smoke. If it is snatched out of your mouth and shoots into the hood like a comet, then you can be sure the velocity of the hood is O. K.

Cold Cabinet

The Precision Scientific Company—1750 N. Springfield Avenue, Chicago 47, Illinois, announces their new Vari-Temp Cold Cabinet.

This cabinet is available in two sizes, 1 cu. ft. capacity and 8 cu. ft. capacity. It operates with dry ice and was designed and developed to satisfy all the cold tests conditions encountered and required by present day testing techniques, from —90° F to +220° F. The vertical front opening door provides easy access to a spacious chamber, sufficiently large to hold the various pieces of apparatus used in making the Youngs Modulus test of natural and synthetic elastomers at normal and sub-normal temperatures, according to ASTM D-797. The apparatus and specimens under test are readily visible at all times since a seven pane sealed window unit prevents condensation and frosting. Ready visibility is insured by a fluorescent light which is shielded to prevent both direct and indirect glare. Thermometers and instruments in any part of the chamber can be easily read from the outside, since there is no glare and no condensation.

The incorporation of a heating unit in this cold chamber allows a full temperature testing range of from —90° to +220° F.

Thermal losses are kept at a minimum by completely insulating the inner wall from the outer wall.

Constant temperature in the specimen chamber is insured by an air stirrer, which holds the temperature constant to +1° F. This fan is automatically turned off when the door is opened to prevent a rapid temperature change. A blower circulates the air to and from the chamber.

The specimen chamber is substantially supported by a solid steel support. One hole, 1" in diameter, is provided in the center of both sides, the top, and the rear of the specimen chamber.

Metal plates 4" wide, the height of the chamber are centered on each side, in the rear, and on the top, to provide facilities for mounting the test apparatus from any of these positions. Holes can be drilled and tapped at these points in order to fasten the apparatus securely to the cabinet.

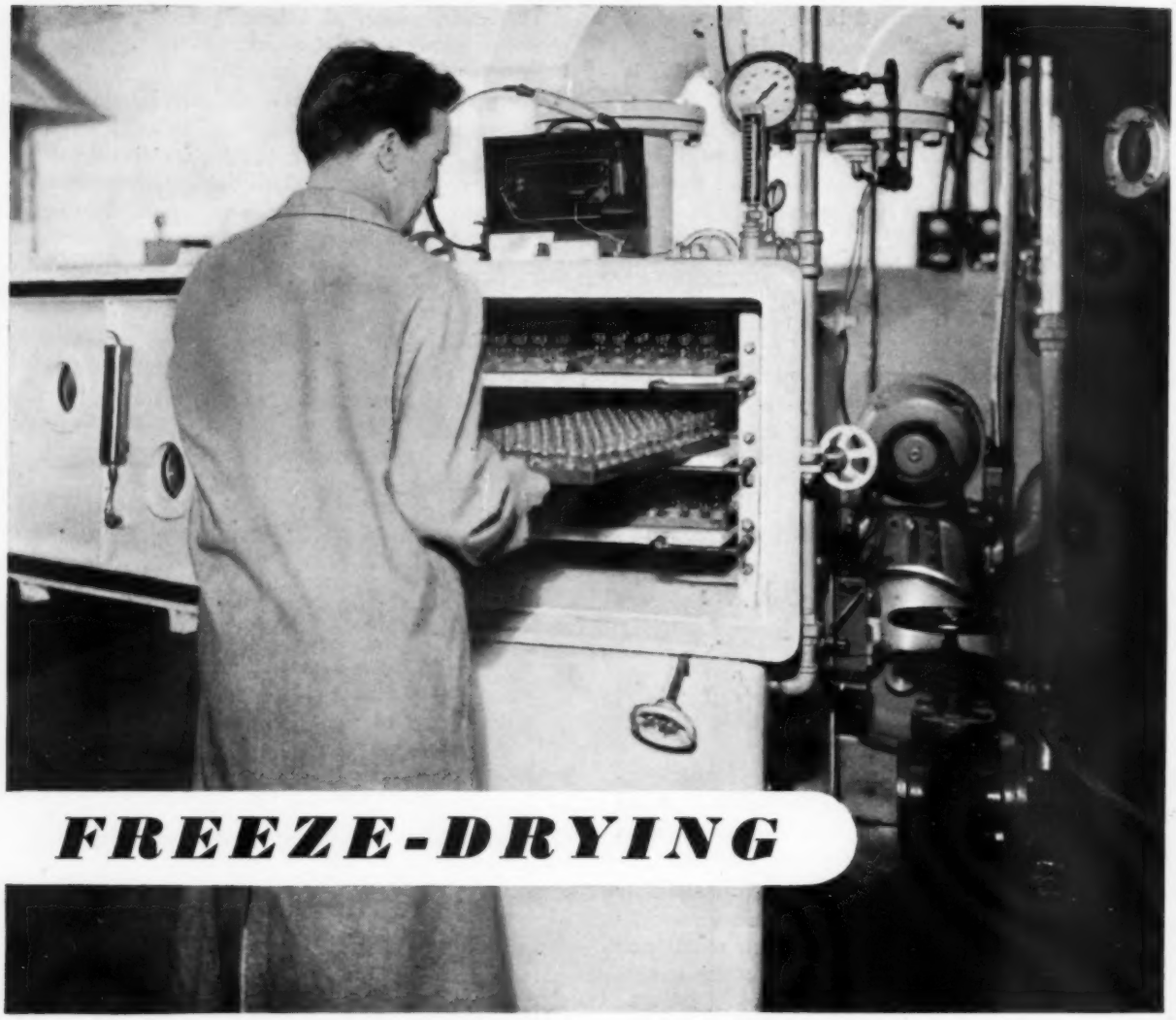
Insulating tubes prevent dissipation of cold from the inner chamber.

Heavy gage tinned copper has been used in all parts liable to corrosion due to condensation. To facilitate cleaning and provide for the disposal of condensation on the inside of the chamber, drains are provided for both the dry ice chamber and the test chamber.

Time Required to Reach Various Temperatures Starting at Ambient Temperatures of 75° F.

+32° F.	—¼ hr.
0° F.	=½ hr.
+25° F.	1 hr.
+50° F.	2=½ hrs.
+75° F.	4=½ hrs.

This Precision Vari-Temp Cost Cabinet is of ex-



FREEZE-DRYING

. . . the proved method and equipment for unlimited preservation, without refrigeration, of highly perishable plasma, penicillin, serums and other biologicals.

Stokes Lyophile-Cryochem freeze-drying equipment for desiccation from the frozen state, has been a vital key to the development of the Penicillin and Blood Plasma Programs. It is equally valuable in the preservation of serums and other labile biologicals. The method is one of Drying by Sublimation* under high vacuum.

Over 10 years ago Stokes, in conjunction with the University of Pennsylvania and Sharp and Dohme, pioneered in the development of equipment for use commercially as well as for laboratory and hospital. Today, more than 275 Stokes units are in use on all kinds of products in universities, research laboratories, government health services, hospitals and commercial plants throughout the United States, and 24 foreign countries.

Stokes engineers and manufactures complete equipment for this process, from test tube to full-scale production capacity.

Facilities and authoritative assistance are available for research with and development and application of desiccation from the frozen state. A complete pilot plant in the Stokes Laboratory is used for tests and demonstrations. Wide field experience is also at your disposal. Our technical staff invites your consultation.

F. J. STOKES MACHINE COMPANY
5932 Tabor Road **Philadelphia 20, Pa.**

*Jour. of Immunology, Vol. 50, No. 1, 1945

50th year of Service to Industry

F.J.Stokes *High Vacuum*
PUMPS · GAUGES · EQUIPMENT

FJS Est 1895

tremely rugged construction throughout, and is made to give years of service. The special construction and arrangement of the ducts prevent the carbon dioxide gas from entering the specimen test chamber. Mechanical convection provides uniform temperature.

All temperatures are controlled thermostatically, one thermostat being provided for low temperatures, and one for high temperatures.

The 1 cu. ft. box is 53″ high, 26″ wide, 26″ deep. The capacity of the dry ice trays is 15 lbs.

The 8 cu. ft. box is 73″ high, 39″ wide, 39″ deep. The center of the test chamber, which is 24″x24″x24″ is located at a convenient operating height of 48″. When the 24″ x 24″ door is open the entire test chamber is completely accessable.

This cabinet is attractively finished in anti-corrosive aluminum.

Electrical characteristics: 115 Volts, 60 Cycles AC.

Stock Picking

Everyone who has to pick finished stock to assemble customers' orders will agree it is a job, especially when stock consists of two or three hundred items.

There are several excellent means of collecting stock. The monorail, I think, is best. I've laid out three complete systems. But I doubt if I'd recommend it, unless a client had several hundred items in stock and handled at least one hundred customers orders per day. A lot of carriers and trolleys are needed and these cost about $75.00 each.

In laying out a monorail system bear the following points in mind and you'll have an efficient system: Locate the starting point of the system at or near the shipping office which should itself be located, if building space permits, near the assembly or outgoing shipment area so that the shipping clerk is centrally located and can supervise shippers, truckmen, packers and pickers.

The scale should be located at the starting point and if your cases are small enough to permit them to be placed back in the carrier after packing, the scale should be in the monorail truck. This is, when applicable, a better method than conveying cases to the scale from the packing bunches on a separate belt conveyor. The investment in equipment is much less.

Near the scale, the stencil case should be located. Also, the dispatcher and the checker.

The procedure then would be: orders with address stickers attached (if used) would clear through the shipping officer to the dispatcher, who after looking over the orders pulls the stencils and drops orders and stencils into as many carriers as he deems necessary. The dispatcher may also be the checker.

The carriers are shoved along to the point where the pickers start off with them through the stockroom. Presently, the pickers return to the starting point with filled carriers on another track and the dispatcher or checker, checks the orders and shoots them along to the packers.

At this point, the carrier can be conveyed automatically to any packer by means of an overhead electrified track with an overhead tractor. Switches off the main line into the packers lines can be electrified, too, so that the dispatcher or checker can, by means of push buttons, move the carriers to any packing station.

The empty carriers can be brought back to the starting point by means of an overhead drag chain. If the carriers are used also to transport packed cases to the scale, the drag chain is desirable.

On the carrier or on a belt, the packed orders reach the scale. Weights are marked on the bill of lading copy and, after the used stencils are removed and refiled, the empty carrier begins the circuit again.

Portable table systems follow the same procedure. The packer works directly off the table into the packing case. When the stockroom is located remotely from the packing room an overhead drag chain can be used to haul the tables to the packing room so that pickers don't have to walk so far with each table.

The difference between the two systems described thus far, consists in the fact that one picker can, if necessary, handle half a dozen carriers, whereas a table picker can handle but one at a time.

Tote baskets and boxes are handled either on carriages or trucks or, in some cases, they are conveyorized. More often than not, tote box systems fall down because provision is not usually made for the return of the empties to the pickers. They are allowed to accumulate until they get in the way and then they are picked up and returned.

To be efficient, every system must be designed to minimize rehandling material.

Definitions

Every now and again my old friend, Charles Gillespie of Island Lake Estates, McHenry, Illinois, sticks his head over the covers to make some remarks which, as the following examples will reveal, are certainly to the point even if they are not completely original. One of the definitions appeals to me very strongly and you can guess which one it is.

"A psychologist is a man who spends his time trying to figure out whether we have more fun as children in our childhood or as adults in our adultery."

"A conference is a group of men who individually can do nothing but as a group can meet and decide that nothing can be done."

"A statistician is a man who draws a mathematically precise line from an unwarranted assumption to a foregone conclusion."

"A specialist is a man who concentrates more and more on less and less."

"An efficiency man is a man who knows less about your business than you do and gets paid more for telling you how to run it than you could possibly make out of it even if you ran it right instead of the way he told you. They become carried away by the exuberance of their own verbosity and egotistical imaginings and stuff you with illusory and unreconcilable assertions."

Equipment Construction

The construction of airplanes and the introduction of light alloys of various kinds augers well for post war building construction and machine design as well. Up to now engineers have, of necessity, identified strength with mass. In calculating the strength of a particular structure a five hundred percent factor of safety is allowed to insure against variations and flaws in the strength of materials. This was necessary because as yet no continuous method of inspecting metals has been devised (X-ray possibly may be the answer) to insure absolute uniformity in texture. But airplanes had to be built light and strong and they were—through the use of light metals and stress design.

I read an article on this subject today which supports the belief that what we know about structural strength and structural design is still largely empirical. This article reminded me of a favorite speech of Bill Campbell's when he was executive vice president of the Scott Paper Company. Bill was my immediate boss when I was engaged in the development of special machines for this company. Paper machines, as you know, are massive. Drums and rollers, for instance, may be anything from eight to twenty feet long and from six inches in diameter to fifteen feet, depending upon their purpose. Such drums or rollers must be supported by end bearings only and there must be no sag in them whatever, regardless of their weight or the speed with which they run and this speed is often up to two thousand feet per minute.

The weights of some of these drums are measured in tons and any mention of weight was sure to make Bill mad. "I can't see," Bill would say, "why the hell you fellows can't design machines like trees. Trees are light, strong and flexible." Bill avoided considering what would happen in the paper machine running at a surface speed of two thousand feet per minute if its drums were "flexible". But Bill wasn't all wrong either.

So, I am going to send him the following excerpt from "The Land", giving the comparison in strength between a God-made buttercup plant and a man-made skyscraper. Incidentally, I was in an old mill type structure recently and was appalled to discover that, whereas the building by the book was designed to carry eighty pounds per square foot, it was loaded in excess of three hundred. When I indicated this to the plant manager, he replied imperturbably, "Don't let it upset you. The floor has always been loaded that way for sixty years and it hasn't collapsed yet." (Don't, however, take this as authority for overloading floors.) The excerpt follows:—

"Lately in a meadow not far from my home, I saw a buttercup which the night's rain had beaten to the earth, lifting itself again after the storm. You have seen the same thing many times.

"It requires only a glance to see that here is a problem in mechanics and in strength of materials to baffle all calculation. The power must reside within the plant itself for it has no external braces, derricks or hoists. This particular buttercup was three and one half feet tall, broadly branched, heavily laden with seeds. Three and one half feet tall with a stalk that was only three eighths of an inch in diameter at the base. Its height was one hundred and twelve times its greatest diameter (and half this diameter is a hollow cylinder), yet this plant had already raised itself considerably from the wreckage of the storm.

"You have perhaps gazed in amazement at the skyscrapers of Broadway. It seems impossible that a habitable structure could be reared so high, and equally astonishing is the flexibility of this soaring tower, whereby it "gives" before the wind.

"Yet comparison with the buttercup plant is startling. The Woolworth tower is about 70 feet square where it rises from the roof at the fifty fourth floor; if the buttercup comparison were carried out, the building would stand 8,400 feet high, rather than 792 feet, or more than a mile and a half high.

"It would have projecting arms without brackets or braces, reaching beyond both rivers bounding Manhattan, and these arms would be capable of swinging 180 or more degrees in the wind. Moreover, when prostrated by storm, the building would have power to pick itself up. . . . "

Such a comparison of structural strengths is indeed startling. Perhaps the answer may lie in the meaning of flexibility. What is 'flexibility' anyway? What is the quality wherein one of two materials of equal size and weight will bend and the other will not?

Kill Rats

The old adage, "Build a better mouse trap and the world will beat a path to your door," has become a literal truism in the case of Electronic Traps, Inc., Rochester, New York, though in this case it's rats instead of mice.

The Pied Piper of Hamelin tried to do away with the plague of rats with the hypnotism of music. Rat traps baited with cheese and whatnot have been offered in endless designs. Cats have proved practically worthless in exterminating rats. Poisons have been tried in all sorts of forms—but the recently patented Rochester Automatic Trap, built by Electronic Traps, approaches the problem from the 20th Cengury angle—it catches and kills the rat by electricity!

At first glance, the Rochester Automatic Trap might remind you of one of Rube Goldberg's fantastic inventions, but, as you see it operate, the whole idea becomes very plausible.

The inventors first spent years studying the nature and habits of this cleverest and, at the same time, most dangerous and destructive of all rodents. Few persons are aware that the rat is the most intelligent of all animals, a fact that explains his consistent ability to outwit man down through the generations.

Yet the rat has certain ingrained habits and the inventors of the Rochester Automatic Traps have utilized these habits to let Mr. Rat assist in his own downfall. For instance, the rat doesn't like deadend

"Let me show you my Operation!"

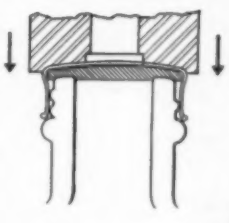
In fact, Alseco Rolled-On Seals can rightfully boast about *two* different operations.

There's the sealing operation in your plant. With Alseco Sealing Machines, it's sweet! Low in cost because it's fast and takes only a part time operator to keep the hopper filled. Trouble-free because Alseco Machines are engineered and built to keep humming right along day after day. Ask anyone who has them!

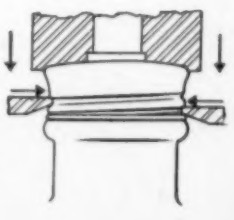
And there's the sealing operation they do on your product. Sweet, too! Each R-O Seal is tailored to fit its container, "min" or "max". You get the same secure sealing pressure on every bottle or jar. Leakers and breathers cut to a minimum.

Get all the facts about these better seals now. Soon they'll be plentifully available for all types of products.

WHY ALSECO R-O SEALS SEAL BETTER



1. Plain-skirted Alseco Seal is seated squarely on container. Under stationary top pressure, container lip is embedded in cap liner evenly all around, effecting the seal.



2. While the seal is thus held under pressure, threads are Rolled-On to conform exactly with threads on container. Each seal is tailormade, fits perfectly, seals tighter.

ALSECO

SEALS AND SEALING MACHINES

ALUMINUM SEAL COMPANY • 1523 THIRD AVENUE • NEW KENSINGTON, PENNSYLVANIA

SUBSIDIARY OF ALUMINUM COMPANY OF AMERICA

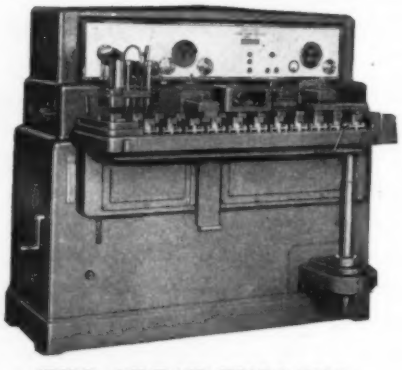
NOW THAT VICTORY IS WON, LET "I WILL" BE OUR SLOGAN!

MUCH work remains to be done on the home front. Fortunately, our own reconversion and rehabilitation problems are far from being difficult.

As this company plows deep into accumulated peacetime orders, it loudly voices appreciation of the unbroken, loyal, cooperative support of its workers and management for having produced so well such quantities of important war material.

An exemplary record of
real American team play!

To make for enduring peace, we must have faith in one another, work hard, and treat with fairness and sincerity in all of our contacts. In no other way can we pay proper honor to the memories of those heroes who have fought and died for a principle.



THE GREAT ENDWELD

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Completely automatic, semi-automatic, hand-fed equipment to clean, fill, close, convey jars, bottles, tins and collapsible tubes.

Also

Filters • Pumps • Percolators

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Let Us Know Your Requirements

THE KARL KIEFER MACHINE CO.

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streets and is very reluctant to trod on a surface unfamiliar to him. He is also a creature of habit in that he almost invariably takes the same route from his hiding place to the place he seeks food and water.

Consequently, the Rochester Automatic Trap has no floor and is open at both ends like a tunnel. The trap is placed where it has been discovered by tracks and droppings that the rat runs. It can be plugged into any convenient electrical socket.

In way of abbreviated description here is what happens: The unsuspecting rat starts to run through the tunnel of the trap. Midway in the tunnel, he breaks an unseen electric eye beam. Breaking this beam quickly drops the doors at either end of the tunnel. This is phase 1, the rat is caught. Now comes phase 2, the extermination of the rat.

In the same action that closed the tunnel doors, a small door at the side of the trap was opened. The rat sees this possibility of escape and rushes through this small door into a small compartment with a covered ramp leading upward into what is known as the "electrocution chamber."

Still seeking escape, the rat starts up this ramp. As his feet touch the floor of the ramp, the small opening he used to enter the compartment quickly closes behind him, his feet are tickled by a slight electric shock, and he rushes on bolting into the electrocution chamber where electric contact clamps him tightly in the vise of electrodes which for a short period pass through his body. (Note that the 110 volt shock from the building's regular current is sufficient to kill the rat quickly.)

Thereupon the death chamber floor drops away depositing the dead rat's body in a basket outside the trap. At the same time, the trap automatically resets itself for the next victim. The entire procedure from the time the rat cuts the electric eye beam to the rat's death and the resetting of the trap averages about three minutes. Result—great potential trapping and killing possibilities with no attention required. The trap takes care of itself!

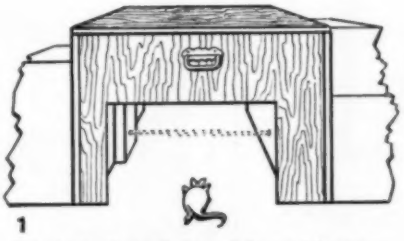
You may ask, "Do rats eventually get 'wise' to the trap?" Electronic Traps says "No." After witnessing the death of thousands of rats, their engineers came to the unquestioned conclusion that the death of one rat in the trap had no bearing on others entering the trap. This is because in the Rochester Automatic Trap the electrocution of the rat takes place in a separate chamber than that in which the rat is caught.

Due to wartime manufacturing restrictions, the Rochester Automatic Trap has until now not been introduced countrywide but, however, has been widely used by the Army and Navy and by an impressive number of leading manufacturers and mercantile houses who have provided Electronic Traps Inc. with a convincing file of strong unsolicited letters of endorsement.

Electronic Traps, Inc. proceeds on the thesis that it is no disgrace for a business house to have rats but it is a disgrace to keep them—pointing out that rats breed 9 to 12 times a year and litters range from 6 to 22. The young mature in 3 months and only continuous effort will reduce the danger. While the damage rats do to the nation's health is even more frightening,—for rats are notoriously infested with fleas which transmit to humans such diseases as bubonic plague, ratbite fever, a form of typhus, malaria, etc.

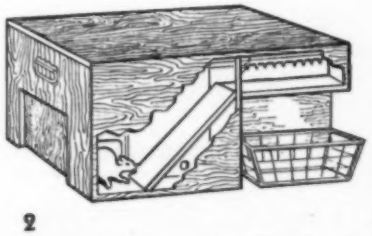
Incidentally, the company does not sell the trap outright, but rents it to the party who is annoyed by rats until such a time as the infestation is eliminated.

CUTAWAY SKETCHES SHOW HOW THE Rochester Automatic Trap CATCHES AND KILLS RATS BY ELECTRICITY



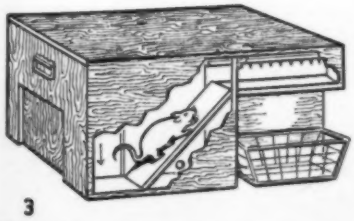
1

Rat starts through tunnel formed by trap. When he breaks the electric-eye beam the doors at both ends of the trap drop.



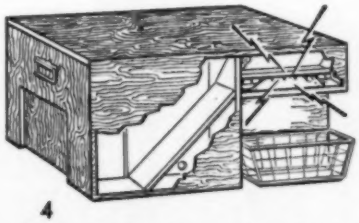
2

As the tunnel doors dropped, the small door at side of trap opened. Rat seeking escape rushes into this compartment.



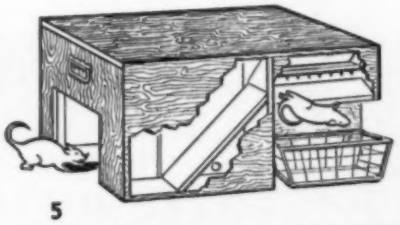
3

Still seeking escape rat moves up ramp to "execution chamber". His weight on ramp drops small compartment door.



4

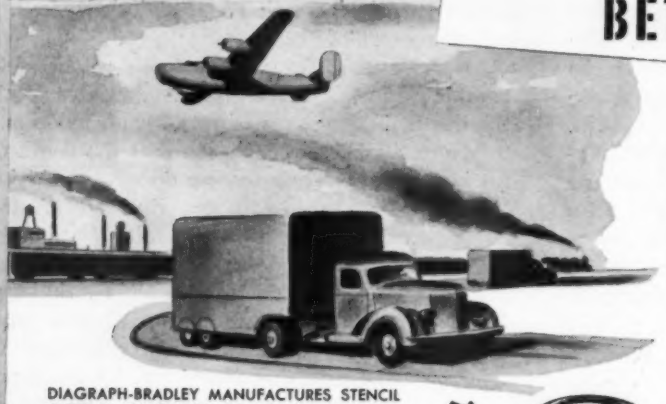
Rat bolts into the electrocution chamber where he is gripped firmly by electrodes that pass the killing shock through his body.



5

The rat killed, floor of death chamber drops depositing dead rat in basket. Trap automatically resets self for next victim.

BETTER INKS
BETTER DELIVERIES



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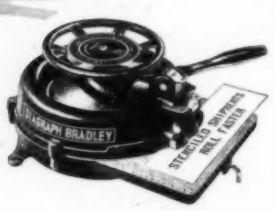

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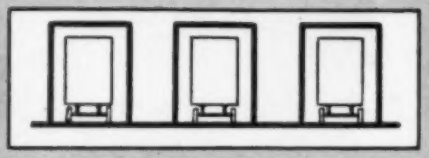
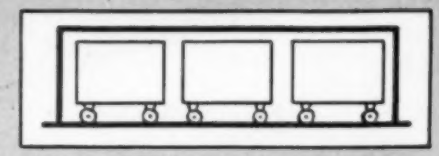
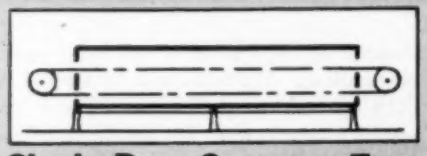


Batch Type

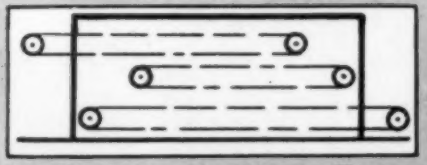


Manual Truck Tunnel Type

Floor Pusher Tunnel Type



Single Pass Conveyor Type



Multi-Pass Conveyor Type

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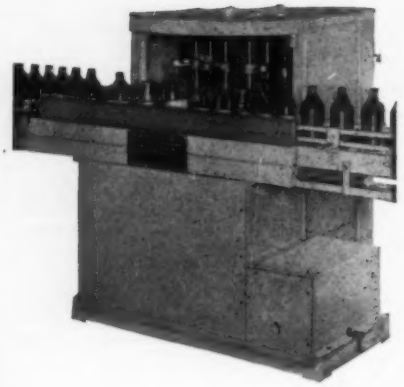
For CLEANING YOUR CONTAINERS



The U. S. Sanitair Double-Action Automatic Air Cleaner

FOR many products filled in bottles which come packed in re-shipping cases, an efficient air cleaning will remove all dust, lint or foreign substances. Particularly is this true on small necked or AGST glassware.

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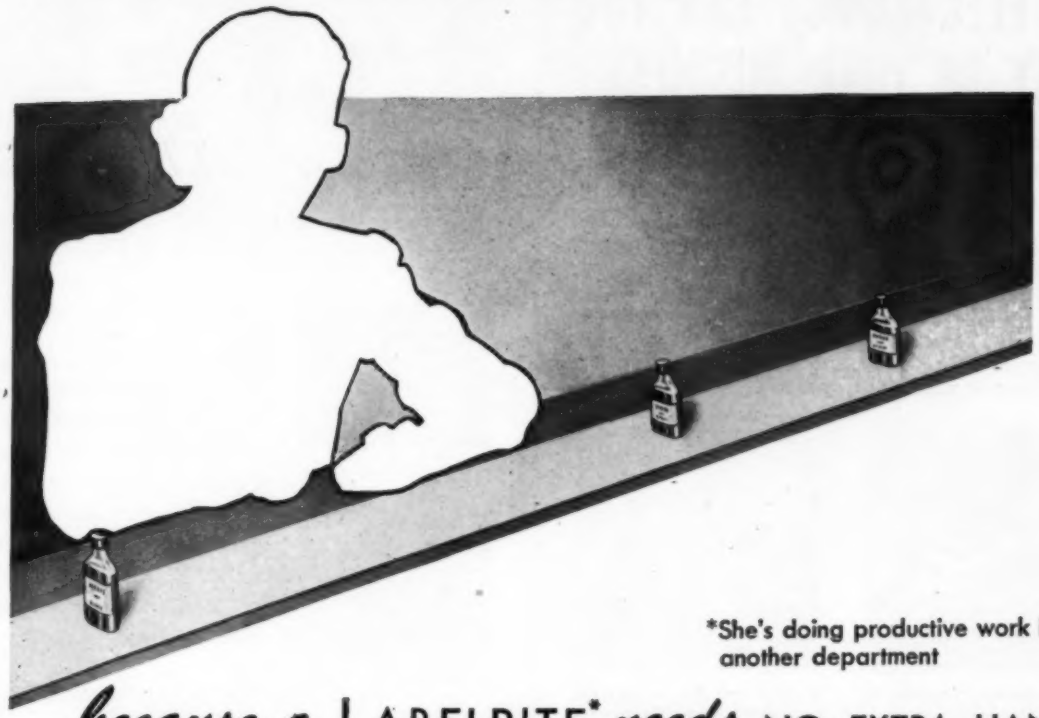

*She's doing productive work in another department

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Annie used to sit in a Labeling line, wiping excess adhesive from containers (to keep them clean-looking), but LABELRITES enabled the factory Superintendent to do away with *that* job (and that cost) and put Annie to work elsewhere.

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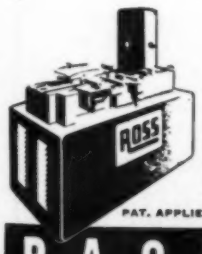

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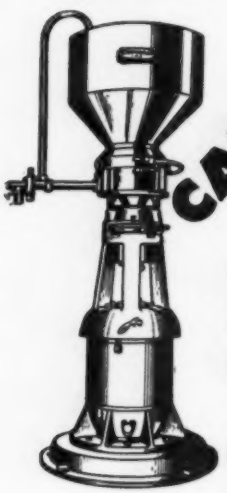

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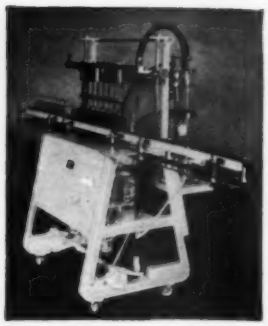

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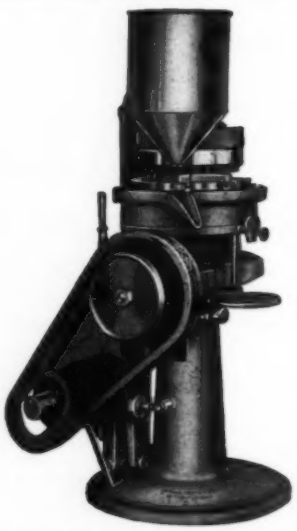

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Eye-appeal also registers with druggists . . . tempts them to display drugstore items packed in cans. Cans are trouble-free, sturdy — more than 98% steel, less than 2% tin. In these shatterproof steel-and-tin containers, your drugstore items are protected against careless handling . . . can be used effectively in any form of sales-building display.

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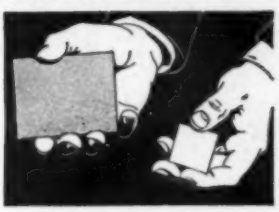

It's more than 98% steel, less than 2% tin

Pointers on Packing Your Drugstore Items in Cans

1. Cans are economical to store and ship . . . require no special handling or packing.
2. Cans don't break, split or tear.
3. Are light, compact . . . save space on busy retail shelves.
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5. Lithograph-labeled cans display effectively and safely.

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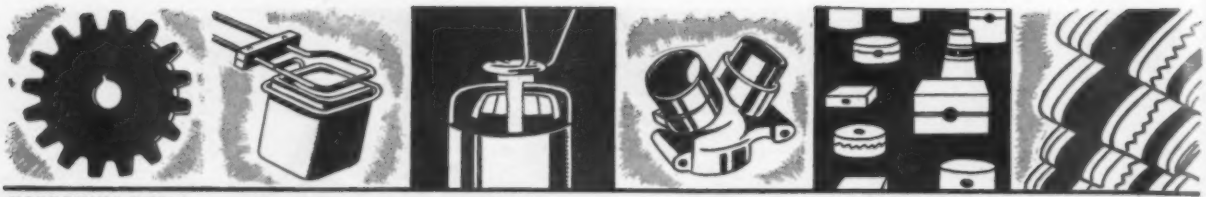

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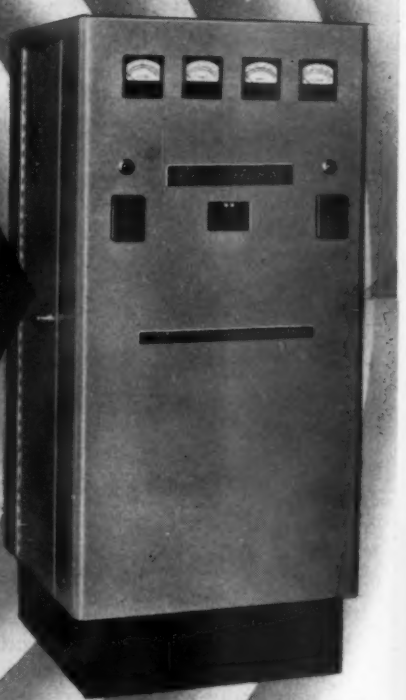

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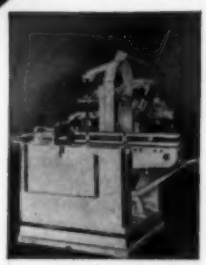
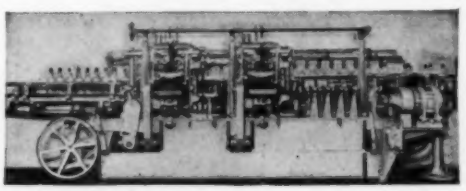
World Labelers are ready to give you better, more economical labeling than ever. May we submit recommendations and estimates?



The WORLD TURRET Labeler for high quality, low cost labeling on smooth, fluted or fancy containers.

The WORLD Semi-Automatic Labeler, Model S, for applying body labels, neck labels, all around labels, to any size container from ampoules to gallons.

WORLD LABELERS



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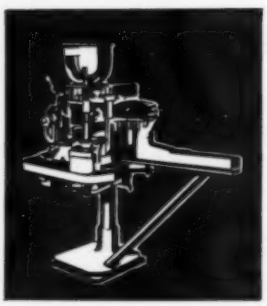

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Industry's Books

Ebulliometric Measurements, by W. Swietoslawski, Professor In Absentia of Physical Chemistry of The Institute of Technology, Warsaw, Senior Fellow, Mellon Institute of Industrial Research, 228 pp., Reinhold Publishing Corp., New York, $4.

The purpose of this book is to make available to physico chemical researchists, teachers and students a comprehensive description of the ebulliometric method for measuring the boiling and the condensation temperatures of liquids and solutions. These measurements have found large application in ascertaining the degree of purity of liquid substances, in examining the azeotropy of binary and ternary mixtures, in molecular weight work, in microanalytical determinations of impurity contents, in studying the thermal resistivity of liquids, in tonometry, and in every day analytical tasks.

The Chemistry Of Leather Manufacture, by George D. McLaughlin, Director, B. D. Eisendrath Memorial Laboratory, Racine, Wisconsin, and Edwin R. Theis, Professor of Chemical Engineering and Director of the Industrial Biochemistry Laboratories at Lehigh University, 800 pp., Reinhold Publishing Corp., New York, $10.

The purpose of this monograph (American Chemical Society Monograph Series) is two-fold. It is designed primarily to summarize and to appraise our present scientific knowledge of the conversion of animal skin into leather. Its other purpose is to serve as a memorial to the life and work of a gifted pioneer leather scientist, John Arthur Wilson, the author of its first two editions, published in 1923 and 1929 respectively. Contents: 1. Introduction. 2. Histology of Skin. 3. The Composition and Chemical Structure of Skin. 4. Combination of Proteins with Acids, Bases, Salts and Heavy Metals. 5. Shrinkage Temperature of Collagen. 6. Microorganisms. 7. Curing. 8. Soaking. 9. Liming and Depilation. 10. Bating. 11. Pickling. 12. Aldehyde Tanning. 13. Quinone Tanning. 14. Chemistry o Chromium Salts. 15. Chrome Tanning. 16. Theory of Chrome Tanning. 17. Vegetable Tanning. 18. Theory of Vegetable Tanning. 19. Iron Tanning. 20. Alum Tanning. 21. Syntans. 22. Miscellaneous Tannages. 23. Neutralizing. 24. Fatliquoring, Oiling and Stuffing Leather and the Materials Employed. 25. Physical Testing Methods.

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ADVANCING THERAPY

Vitamins and the G.I. Tract

In discussing the effect of vitamins on intestinal function, L. D. Wright, Jr. (*New Orleans Med. & Surg. J.* 97:400, 1945) remarks that vitamin deficiencies are usually multiple and therefore the typical picture of a single vitamin deficiency is rarely seen, but he has found almost any vitamin deficiency will produce one or more symptoms or signs in the gastrointestinal tract. He believes that the most common of these pathologic changes in vitamin A deficiency are alterations in the teeth, inflammatory or atrophic changes in the mouth, stomach and intestinal mucosa, and inflammatory changes of the accessory glandular organs which may interfere with absorption from the intestines and lead to hypochlorhydria. Roentgenograms of the intestines in vitamin B deficiency show areas of spasm of variable length interspersed with filled areas. The filled segments, it is found, are usually associated with hypomotility. The outstanding gastrointestinal symptoms of vitamin C deficiency are gingivitis, anorexia and diarrhea, since in vitamin C deficiency there is reduction of the intercellular substance of the capillary walls.

Penicillin Suppositories

It is pointed out by L. Loewe, E. Alture-Werber and P. Rosenblatt (*J.A.M.A.* 128:18, 1945) that the rectal administration of penicillin has not been attempted, probably because of the assumption that the presence of the penicillinase-producing colon group of organisms might serve as an impenetrable barrier. Despite misgivings in this direction, experiments were undertaken to explore the possibilities of rectal administration because of its simplicity, the wide latitude in the selection of adjuvants and the obvious clinical advantages.

Varying amounts of the sodium salt of penicillin were incorporated by hand in a simple cocoa butter base. Suppositories were inserted rectally without any previous preparation in hospitalized in-bed patients, selected at random, and in healthy ambulatory volunteers. The 14 subjects were instructed to retain the suppository, which caused little, if any, momentary discomfort. Blood samples were withdrawn hourly for 12 hours and after 24 hours for penicillin assays.

It was found that prolonged, effective penicillin blood levels could be obtained following the administration of penicillin by rectal suppository; best results being obtained in hospitalized recumbent patients. The results have been so promising that work is now in progress to revise the technic of administration, to find an ideal retarding base and to test other penicillin salts in order to achieve optimum results.

Alcohol as a Skin Sterilizing Agent

Some thirty experiments, using six different methods, were carried out by G. T. L. Archer (*Brit. Med. J.* 2:148, 1945) to test the effect of various dilutions of ethyl alcohol on bacteria, with special attention to the optimal dilution for use on the skin. As a result of this work, certain conclusions were drawn regarding the effective strength of alcohol for destruction of bacteria after short exposure. On a dry surface, the effective range of strengths of alcohol for killing non-sporing bacteria is between 90 and 50%. The lower surface tension of stronger alcoholic mixtures suggests that the upper limits of this effective range may be preferable to the lower, though against this must be considered the more pronounced fixing effect of strong alcohol, which may cause the coagulation of an exudate and the consequent protection of living organisms within the coagulum so formed.

On the skin, the picture is modified by certain conditions. Since the normal skin is more or less moist the effective range of alcohol for use upon it is somewhat different. One hundred per cent is commonly effective—at least on moister skins and under tropical conditions of temperature and humidity; while under similar conditions 60% to 65% may show a certain loss of efficiency. The washing of the skin before the application of alcohol might be expected to exert a similar effect unless subsequent drying were thorough. Further, the value of a low surface tension may well be of importance in increasing spread and penetration, for skin sterilization. It is therefore considered that, as a general recommendation under all climatic conditions, 80% of alcohol by volume is probably most suitable for skin sterilization, though this will not be more effective than any other non-persistent agent for dealing with deep-lying resident flora.

Oral Penicillin plus New Antacid

Recently in the laboratories of the University of Maryland School of Medicine a new antacid, basic aluminum aminoacetate, was synthesized and studied pharmacologically and clinically. Having established the value of the compound as a rapidly active antacid with high buffer capacity, the thought of using it to protect penicillin from destruction by gastric acid occurred to J. C. Krantz, Jr., W. E. Evans, Jr. and J. G. McAlpine (*Science* 101:618, 1945). After a series of laboratory experiments, twelve individuals were given 100,000 units of penicillin mixed with 3 grams of basic aluminum aminoacetate, suspended in 100 to 150cc. of water. The mixture was administered in the morning on a fasting stomach. Penicillin serum levels were determined at regular intervals.

Wide variations were found in the rates of penicillin absorption and excretion. Effective levels were obtained soon after ingestion and the presence of the drug in the serum, in some cases, could be detected seven hours after ingestion. It was concluded that this method appears suitable for the oral administration of penicillin and basic aluminum amino acid seems admirably suited for the purpose. It is neutral and buffers gastric acid in pH4 to 4.5. The combination is now being tested clinically.

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Streptomycin for Typhoid

During a local epidemic of typhoid, H. A. Reimann, W. F. Elias and A. H. Price, decided to test the efficacy of the antibiotic, streptomycin, for the treatment of this disease. Because of the limited amounts of streptomycin available, only 5 patients with severe or moderately severe attacks were selected for treatment and study. Of these patients, three recovered during parenteral treatment with streptomycin.

Studies made during these clinical trials have provided interesting information concerning this antibacterial substance. Streptomycin, a nontoxic antibiotic substance derived from *Actinomyces griseus*, when injected intravenously or intramuscularly in doses of from 1 million to 4 million units daily appears in the blood and urine in patients with typhoid in amounts theoretically sufficient to kill *E. typhosa*. Small quantities are excreted in the feces. When given orally, only traces appear in the blood and urine, and most of it is excreted unchanged in the feces in quantities excessive to suppress *E. typhosa* and *E. coli*. Both parenteral and oral therapy seem to be desirable in treating typhoid, the one to control systenne and urinary tract infection, the other to sterilize the feces, to prevent reinfection and to avoid the carrier state. There is evidence that different strains of *E. typhosa* vary in their resistance to streptomycin, but there is no evidence here of the development of increased resistance to streptomycin during exposure to it in the body.

Preparations of streptomycin are more stable than of penicillin, but in comparison with penicillin its unitage and bulk are far greater. When it is further purified or concentrated, streptomycin will probably not be any more toxic than penicillin. It is probable that substances are present in the body which inhibit to some extent the influence of streptomycin on *E. typhosa*.

Modified Penicillin for Oral Use

From investigations made to date, it appears to H. Welch, C. W. Price and V. L. Chandler (*J.A.M.A.* 128:845, 1945) that successful oral administration of penicillin may hinge on complete neutralization of the acidity of the stomach plus a relatively slow release of this drug from some chemical which adsorbs it readily. On the basis of previous experience with metallic hydroxides, penicillin was treated with aluminum hydroxide gel U.S.P. or with magnesia magma U.S.P. by adding 30 cc. of the former and 20 cc. of the latter dropwise with constant agitation to 100,000 units of penicillin dissolved in water. From studies made on these preparations, it appears that penicillin is adsorbed more readily by aluminum hydroxide, than by magnesium hydroxide, but that magnesium hydroxide is more retentive.

Clinical investigations on a group of volunteer subjects showed that the oral administration of penicillin modified with either aluminum hydroxide or magnesium hydroxide results in prolonged blood concentration of this drug. Because of the prolonged penicillin concentrations in the blood following this method of oral administration, it is suggested that this dosage form may have some prophylactic value. Noteworthy is the finding that since the penicillin-aluminum or penicillin-magnesium hydroxide mixtures may be prepared just prior to use, no stability problem is involved. However, such mixtures, kept at refrigerator temperature, have been found to be stable for at least thirty days.

Lotion for Pediculosis

The control of pediculosis is a problem of primary importance to the civilian and military populations of the world today. On its control depends the control of louse-borne diseases, such as typhus. Therefore, the report of H. A. Shelanski and his associates (*Arch. Dermat. & Syph.* 51:179, 1945) is of pertinent importance. In their work on the control of pediculosis humanus capitis (head lice infestation), use was made of a lotion containing 5 per cent isobornyl thiocyanoacetate and 0.6 per cent dioctyl sodium sulfosuccinate in a suitable form for application in the treatment of pediculosis. The lotion is a milk white emulsion which is stable under ordinary conditions and which is completely water miscible. Moreover, treatment with this lotion does not require much more technic or manipulation than an ordinary hair shampoo, and the emulsion is easily washed from the hair with soap and water.

In all, some 1,487 persons with heavy pediculosis infestation were treated with this lotion, all cases being freed of their infestation with one or two applications. Of this entire group only four irritative reactions were obtained. Experience with this lotion indicates that it is more effective by far than any other preparation that had been used. The lotion acts so rapidly that most of the pediculi are killed on the first application. The nits are loosened in a few minutes and can easily be removed. Incubation of these nits at 32 C. did not cause any lice to hatch. Apparently the nits were killed. The hair is much easier to comb after the use of this emulsion.

Vitamin Deficiencies and Abortions

Writing in *Surgery, Gynecology and Obstetrics* (80:139, 1945), W. E. King reports a study of vitamin deficiency in 100 patients with threatened, previous spontaneous or habitual abortion. In the cases of inevitable and complete abortion, prothrombin time and vitamin C determinations were found to be lower than those in normal pregnant women. In cases of threatened abortion, there was found no appreciable difference in vitamin C level and prothrombin time between the threatened group and the normal controls. The author suggests that pregnancies showing abnormal bleeding tendencies, either by previous history or by active bleeding, be given vitamin K and vitamin C tests and that all deficiencies be corrected. Further studies are believed necessary to determine both the effectiveness of vitamin E therapy in threatened abortion and the optimum dosage. He gives a patient with threatened abortion complete bed rest, a full diet fortified with vitamins K and C when indicated, sedation, and corpus luteum hormone.

Nicotinic Acid in Vincent's Angina

In a letter commenting on the value of penicillin in the treatment of Vincent's angina, W. M. Johnson (*J.A.M.A.* 129:91, 1945) suggests that nicotinic acid or nicotinamide has been found to be just as effective as penicillin in such cases. For nearly four years he has been using this member of the vitamin B complex in all acute cases of Vincent's angina and has found it "eminently satisfactory." The dose employed is 50 mg. three times daily for adults; for children, 10 mg. and upward according to age. A week's treatment is usually sufficient. The temperature in all of Johnson's cases subsided within 48 to 72 hours and the bacteriological smears have all been negative within four to seven days.

(Continued on page 576)

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Aluminum sulfate	15
Glycerine	8
Water	24
Reaction product of lactic acid, and 2-hendecyl-4-hydroxy-methyl-4-methyloxazoline	28
Stearic acid	20
Spermaceti	5

Stearamide, New Cosmetic Raw Material

Already widely used in the textile industry, S. P. Jannaway (*Perf. & Essent. Oil Rec.* 36:117, 1945) is enthusiastic concerning the possibilities of stearamide in the cosmetic industry. Stearamide, $CH_3(CH_2)_{16}CONH_2$, has been described, when in the pure state, as colorless leaflets melting at 109° C., boiling at 25° C. at 12mm. pressure; insoluble in water, soluble in alcohol. In commerce, it appears as a pleasant, light grey-brown version of stearic acid, with very little odor and a fatty, waxy feel.

Stearamide is a higher fatty amide, as the formula shows and it is soluble in mineral oil. The commercial product contains about 10 per cent free fatty acids, but it is *not* recommended that this fact should be utilized as a reason for employing alkali to effect saponification. The idea is to use the stearamide to impart polarity to otherwise non-polar oils and waxes or to increase it in those already possessing some degree of polarity. Valuable in making cosmetic emulsions, an important property of stearamide emulsions in their stability even after drying down by natural evaporation and the consequent re-emulsification of partly dry oil films by water or more efficiently by soap solutions.

Jannaway has made many stable and intersting cosmetic emulsions, using stearamide in small quantities (1½ to 5 per cent) as a polarizing agent. A hair cream, for example, can be made on such lines as the following:—

	Per cent
Stearamide	4.0
Soap chips	3.5
Mineral oil	24.5
Beeswax	1.5
Water	66.5

The constituents are heated together, stirred until cool, and then preferably homogenized. Apart from the additional stability that stearamide, judiciously incorporated, imparts, it also serves to facilitate subsequent shampooing, owing to its ability to re-emulsify mineral oil residues if still present in sufficiently reasonable amounts. From 2½ to 7 per cent stearamide has been used by other workers in emulsions of the type quoted above.

Ethanolamine Thioglycollate

Thioglycollic acid and its sodium potassium and ammonium salts are now available in England for the manufacture of permanent waving preparations. In addition, according to S.P.C. (18:537, 1945), *one firm has introduced ethanolamine thioglycollate. This is described as a syrupy, yellowish, nearly odorless liquid, outstanding because it is a stable soap which forms practically neutral solutions. Hence, it is claimed, when used for cold permanent waving there is little risk of irritation to the scalp as compared with the more alkaline solutions of the sodium, potassium or ammonium soaps. A small amount of a wetting agent is added to ethanolamine thioglycollate in order to assist penetration of the hair. The reaction of ethanolamine thioglycollate with the sulfhydryl groups in the hair structure, is the same as that of the more familiar alkaline thioglycollates and its method of application is also essentially the same.*

Water-in-Oil Emulsifiers

According to E. L. Cataline, F. Reinish and L. Worrell (J.A.Ph.A., *Scientif. Ed. 34:36, 1945*), *one of the more serious criticisms of the emulsions prepared from the cholesterol-cholesteryl ester absorption bases is that they are not satisfactory in so far as stability is concerned. The number of types of medication which may be incorporated in them is limited since many medicaments either break or reverse the phases of the emulsion systems produced when the base is mixed with water. Upon standing for varying lengths of time many of the emulsions separate even though the medication may not be involved in the separation. Furthermore, when the emulsions are rubbed on the skin they usually separate, the aqueous phase appears in the form of droplets and the appearance and "feel" of the ointment are definitely unsatisfactory.*

In attempts to overcome some of these difficulties a series of studies was instituted. It was found that soybean lecithin and cetyl alcohol improved the shelf test and skin test qualities of emulsions of distilled water in white petrolatum promoted by a mixture of cholesterol and cholesteryl stearate. The addition of sorbitol to such emulsions resulted in softening upon standing and liquefaction upon application to the skin. Cocoa butter, diglycol stearate, castor oil, hydrogenated castor oil, heavy mineral oil, carbitol and triacetin were of little or no value in enhancing the stability of such emulsions.

Scalp and Hair Tonics

In a comprehensive review of scalp and hair tonics, which includes a discussion of the value and uses of the various ingredients, the physiology of the hair and a number of selected formulas, S. P. Jannaway (*Perf. & Essent. Oil Rec.* 36:149, 1945) remarks that products of this type frequently fail to achieve any profitable degree of popularity largely because an insufficient amount of thought and research has been devoted to their formulation and marketing. Manufacturers, he notes, have the choice of marketing two

Why Glycerine is a SUPERIOR PLASTICIZER

GLYCERINE *solutions* do not differ markedly from glycerine itself in plasticizing action on hydrophillic (water-absorbing) materials. Glycerine absorbs moisture from the air, and the result is an increased weight of glycerine solution, which is distributed throughout the material in which it is used. This happens in tobacco, leather, cellophane, adhesives—or any of hundreds of other materials in which glycerine is used as a humectant-plasticizer. Actually, when glycerine is added to a product, its effect is to give the benefit of up to *three times its weight of plasticizer.*

In addition, glycerine's low vapor pressure, high sweetening power, value as a food, wholesomeness, emolliency, solvent power — all these advantages, plus many others, make glycerine the ideal humectant-plasticizer in many fields.

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In Foods! A food in itself, utilizable by the body as a carbohydrate, and with high sweetening power, glycerine is a standby in making flavorings, confections, soft drinks—and many other foods and food products.

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In Food Packaging! Transparent wrappings that come into contact with foods are made through the use of glycerine—because it is wholesome. Glycerine helps assure you satisfied customers.

very different types of preparation. The first is a purely decorative, esthetically acceptable product (e.g. a friction lotion consisting of delicately perfumed alcohol with a little castor oil) or a more ambitious kind of preparation designed to combat certain pathological conditions of the hair and scalp. The latter intention implies careful study of the medical as well as cosmetic literature and, preferably, the collaboration of an experienced dermatologist.

The basic formulas included are of various types, giving the compounder considerable room for choice in his experiments based upon them. When trying to achieve an "omnibus preparation," care must be taken to guard against incompatibilities. Where high solvent power is not desired, the alcohol content may be cut with advantage to about 40-55 per cent. Most of these products should correctly be termed, not just hair tonics and lotions but hair and scalp tonics. Excessive irritation must be avoided. Finally, the directions should not forget to emphasize the value of shampooing and massage.

Basic Type Formulas

Bay Rum	Parts
Bay oil	2.0
Clove oil	0.3
Pimento oil	0.3
Petitgrain oil	0.3
Ethyl acetate	0.7
Quassia extract	0.5
Denatured alcohol	60.0
Glycerine	4.0
Menthol	0.2
Distilled water, to make	100.0

Tint amber or yellow-brown, either with caramel or a soluble dyestuff.

Friction Lotions	Parts I	Parts II
Castor oil, deodorized	2.0	...
Vitamin F, so-called	0.5	...
Peru balsam oil	0.5	...
Euresol	...	1.5
Glycerine	...	5.0
Saponin	...	0.1
Salicylic acid	...	0.2
Perfume compound	1.0	1.0
Denatured alcohol	96.0	60.0
Distilled water	...	32.2

The perfume for No. 1 should blend with the balsam oil (e.g., an Eastern bouquet type would be suitable).

Anti-Dandruff Lotion 1	Parts
Euresol	0.5
Sulfur oil, refined	1.5
Peru balsam	0.5
Denatured alcohol	70.0
Distilled water	27.5

Anti-Dandruff Lotion 2	Parts
Resorcin or Euresol	2.0
Acetic acid	1.0
Cologne compound	1.0
Tincture of capsicum	5.0
Castor oil	0.1
Industrial spirit, to	100.0

Anti-Dandruff Lotion 3	Parts
Menthol	0.1
Tea-tree oil	0.2
Lavender oil	0.5
Castor oil	1.0
Salicylic acid	3.0
Oxyquinoline sulfate	0.2
Rosemary oil	0.3
Denatured alcohol, finest quality	94.7

Balsamic Hair Lotion	Parts
Resorcinol or Euresol	2.0
Benzoin resinold	0.4
Peru balsam oil	1.0
Tolu balsam oil	1.5
Distilled water	5.0
Glycerine	2.1
Alcohol	88.0

Rejuvenating Hair Tonic 1	Parts
Cholesterol	1.0
Lecithin	0.5
Vitamin F (so-called)	3.0
Benzyl alcohol	0.4
Amyl salicylate	0.8
Jasmin compound	0.1
Carnation compound	0.2
Ethyl acetate	0.5
Beta-naphthol	0.1
Alcohol to make	100.0

Rejuvenating Hair Tonic 2	Parts
Sulfur-cholesterol	0.8
Lecithin (*ex ovo*)	0.5
Oxyquinoline sulfate	0.2
Peru balsam	0.8
Salicylic acid	0.2
Castor oil	1.0
Alcohol	96.5

Continental Type 1	Grams
Salicylic acid	4
Spirit of Camphor	10
Castor oil	2.5
Alcohol (95%) to make	200

This is an official Dutch formula:—

Continental Tpye 2	Grams
Pilocarpine nitrate	0.02
Quinine salicylate	0.46
Tannic acid	0.22
Castor oil	0.20
Water	24.10
Rosewater	25.00
Alcohol (95%)	50.00

This is a slight adaptation of a French formula:

Continental Type 3	Parts
Cinchona tincture	7
Cantharides tincture	1
Eau de cologne	10
Glycerine	4
Clary sage water	2
Rosewater	3
Orange flower water	6
Alcohol (95%)	67

The floral waters in this French formula may be replaced by distilled water.

Aqueous types of hair lotion may be based on terpeneless oils, sulfonated oils, diethylene glycol dilutions, etc. Witch hazel and sage water come in very useful for this type of preparation.

Practically all hair lotions require to be mixed, matured for a while, chilled and filtered. The field for individual experiment is a very wide one, with cholesterol, lecithin, sulfur and related types on the one hand including similar "rejuvenating" or "reconditioning" pomades and creams and, on the other, the familiar antiseptics, detergents, astringents and stimulants. In few cases is it wise to sacrifice attractive appearance and pleasant odor to mere complexity of formula?

Anabasine Sulfate vs Mosquito Bites

Russian investigations of protective agents against the bites of malarial mosquitoes have resulted in the discovery that anabasine sulfate solutions are extremely effective for this purpose, according to the report of V. A. Nabokov in the *American Review of Soviet Medicine* (2:449, 1945). Anabasine sulfate, an alkaloid isolated from the plant *Anabasis aphylla* (Chenopodiaceae) has been used in Russia since 1931 against insects injurious to agriculture. In the present studies, it was found that the application of a 5 per cent aqueous solution of anabasine sulfate to the skin of a person exposed to mosquitoes affords a safe protection for ten hours. Clinical and pharmacological investigations showed that the external use of such a solution is harmless to the skin or health of the person treated.

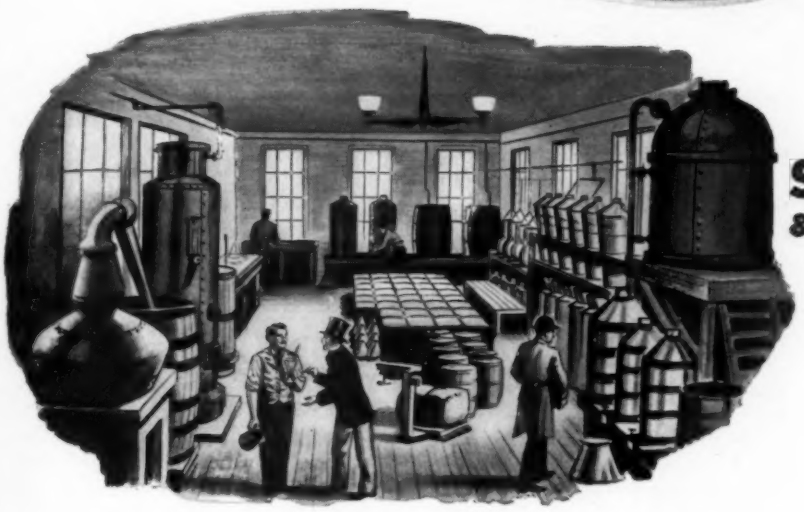
The mechanism of action of anabasine sulfate differs from that of other chemical agents used for the same purpose. Since it is not a repellent, anabasine sulfate apparently acts on the taste organs of the mosquito, thereby discouraging it from biting. In the opinion of Nabakov, the ready solubility of abasine sulfate, its lack of odor, its inexpensiveness, make its large scale application possible and effective.

(*Continued on page 574*)

WHEN THE

FIRST SHIP

CROSSED THE ATLANTIC WHOLLY UNDER ITS OWN STEAM



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Perfumer's Shelf

Studies on Pennyroyal Oil

Reporting in the *Perfumery and Essential Oil Record* (36:121, 1945), Y. R. Naves gives a detailed account of work devoted to the study of the ketones and lactones contained in commercial oil of pennyroyal (*Mentha Pulegium.* L.) of Spanish origin.

Among the products obtained from essential oil of pennyroyal by means of extraction with caustic alkali solution, and final lactonization, there have been identified: carvacrol; thymol; a lactone very probably identical with that prepared by Serniagotto by the photo-oxidation of pulegon; and another lactone with a very bitter taste which may be the nepeta-lactone discovered earlier in the essential oil of *Nepeta Cataria* L. This last lactone is probably contributed to the oil by the admixture of members of the Labiatae other than *Mentha Pulegium* L.

Urticaria from Perfume

That perfumes as contactants frequently cause dermatitis is well known, but the role of perfume as an allergen causing chronic urticaria (hives) due to inhalation of osmyls (odoriferous particles) has been seldom considered. Of interest therefore, is a case of chronic urticaria, apparently due to the scent of perfumes, observed by S. J. Zakon and J. B. Kahn (*Arch. Dermat. & Syph.* 52:11, 1945). In this instance, a woman patient had suffered from hives for a period of six years, during which time a variety of treatments had failed to give relief. When first seen by the senior author, it was noted that she used considerable perfume. Routine examination failed to show any pathological lesions. She was advised to remove all traces of perfume from her clothes, to use unscented cosmetics and to avoid persons using much scent. No medication was given.

After a week of living in a perfume-free atmosphere, the hives disappeared. An attack recurred following a bridge party in a room with forty women who were liberal perfume users. Since that time no further attacks appeared. The patient refused to submit to tests to determine which perfume caused the urticaria. Since laboratory studies could not be made, the evidence that the use of perfumes was the etiological factor is only clinical. Nevertheless, it is believed that in studies of allergic diseases perfume must always be considered as such a causative agent, not only as a contactant but as an inhalant.

Brazilian Sassafras

Brazil is becoming one of the most important suppliers of certain essential oils, one of which is Brazilian sassafras. Experimental distillations were first accomplished in 1938 and with the advent of World War II the demand has greatly increased. Many essential oil firms have experienced difficulty in importation with the U. S. Customs since there was not sufficient information available as to the origin of the oil.

The oil is distilled from the wood of *Ocotia pretiosa* found in a wild state in the great forests of Santa Catrina, and is a by-product of the larger sawmills in this area. Considerable difficulty is experienced in transporting the wood from the interior due to the bad roads and lack of modern equipment and as the cutting of the wood proceeds deeper into the forests, the haulage conditions increase. As time goes on, this factor may cause an increase in the price of the oil. The wood is prepared for distillation by grinding into chips and sawdust, after which it is steam distilled, filtered or centrifuged, and then placed in drums for shipment. The quality of the oil as to safrol content depends greatly on the efficiency of the distillation apparatus.

Many users have thought that the Brazilian product would replace the North American variety but this is not the case. *Sassafras albidium*, the North American species, is an entirely different species and is specified in the United States Pharmacopoeia, but as yet the Brazilian product has not received such recognition.

Perfume Progress in Europe

Remarking on the difficulty of obtaining scientific periodicals and of exchanging information, Y. R. Naves (*S.P.C.* 18:373, 1945) of Switzerland has presented a brief, but comprehensive survey of perfumery research in Europe during the war years, 1940-1945. After discussing progress in analytical methods, he described work on the constituents of essential oils. Thus, a study has been made of the analysis and composition of Southern Italian jasmin concrete. The volatile portion contains notably benzyl benzoate (which has been found also in Provence jasmin), besides other new or unpublished components. In oil of lovage, formerly so little known, quite a large proportion of phthalidic lactones has been found, the most important of which is butylidenephthalide.

More precise data has been acquired on the composition of light tractions and ketonic fractions of geranium oil; and on the "heady" notes of citronella oil; in this latter oil, a cadinol in crystallized form has also been discovered.

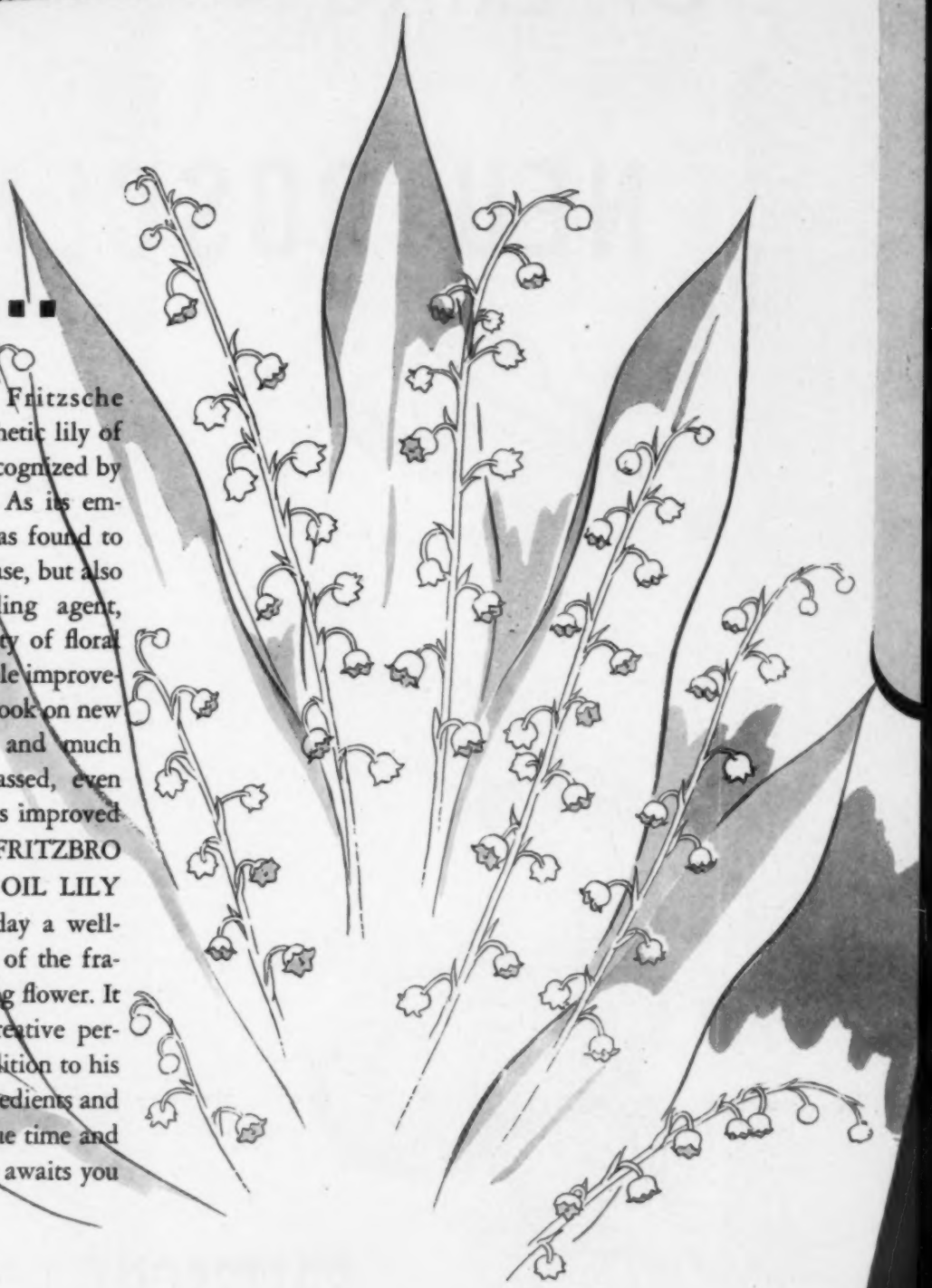
Few new synthetic substances have been made, but fresh methods or technics of synthesis have appeared. The synthesis of linalol and geraniol has received fresh study starting with isoprene, the reaction also yielding farnesol. Cyclopentanones have been obtained by the cyclisation of gamma-diketones in an alkaline medium; in this way dihydrojasmone and jasmone have been prepared. Macrocylic ketones of 14 to 17 links, among which is racemic muscone, have been obtained by a general method of condensing omega-halogeno-acyl-acetic esters with esters of cycloketonic alpha-carboxylic acids. A process has been described of preparing monocyclic lactones based on a functional intramolecular exchange; this process has been applied to the manufacture of isoambrettolides, among which is delta-6-isoambrettolide.

Fixative from Gypsy Moths

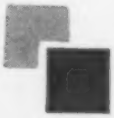
In a rather intriguing article, R. W. Moncrief (*Manuf. Chem. & Manuf. Perf.* 16:167, 1945) suggests the possibility that the gypsy moth may provide the perfumer with a new fixative. Biologists searching for a means of controlling this serious pest of woodland and orchard discovered that a benzene extract of the abdominal tips of the female of the species could be used to lure the males to destruction. There seems to be no doubt that an acute sense of smell in the insect is what gives

FRITZBRO SYNTHETIC FLOWER OIL

LILY OF THE VALLEY...



YEARS AGO, Fritzsche chemists developed a synthetic lily of the valley base that was recognized by the trade as outstanding. As its employment broadened, it was found to be not only an ideal lily base, but also a remarkably fine blending agent, adaptable to a great variety of floral compositions with noticeable improvement of effect. The odors took on new life, were more flowery and much more lasting. As time passed, even this excellent synthetic was improved with the result that our FRITZBRO SYNTHETIC FLOWER OIL LILY OF THE VALLEY is today a wellnigh perfect reproduction of the fragrance of the natural, living flower. It is recommended to the creative perfumer as a most useful addition to his stock of compounding ingredients and one that will prove its value time and time again. A trial sample awaits you on request.



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An interesting mo
This specialty pro
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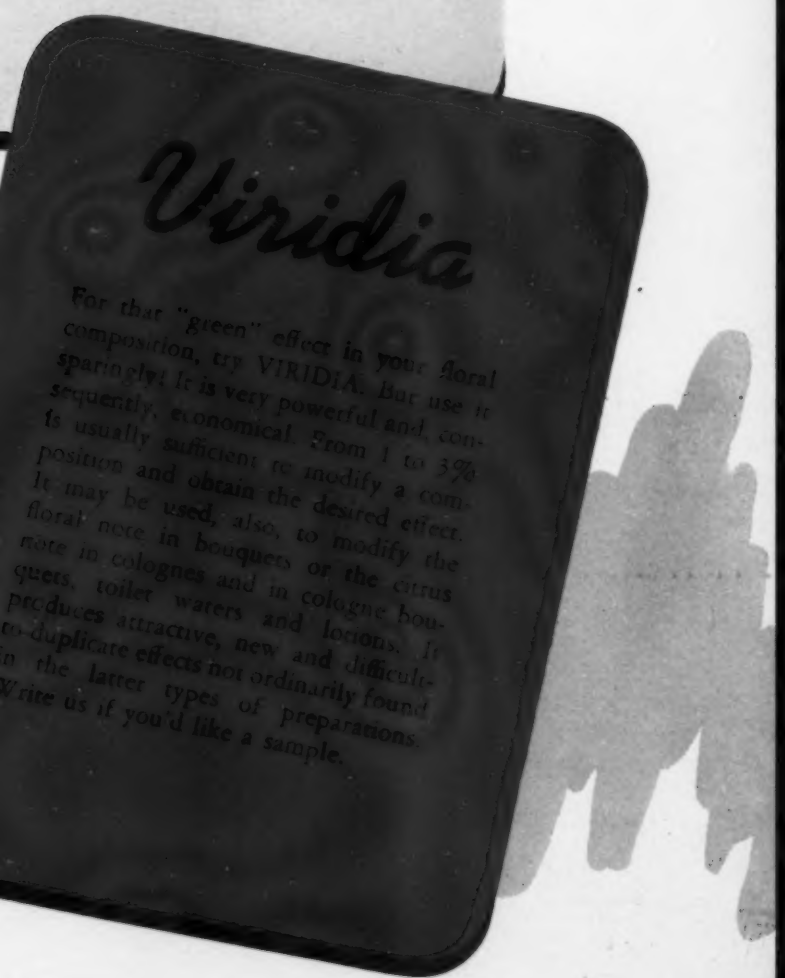
Ambronia

interesting modifier and fixative. is specialty produces a pleasant, rm, ambre note as well as fullness, ength and fixation. It is suited par- ularly to French type bouquets and useful in bouquets lacking in basic tes. It imparts a definite and appeal- character. Depending upon the type odor and composition in which it is ed, AMBRONIA may be employed amounts ranging from 5 to 20%. In avily odored floral bouquets, 1 to 2% ordinarily quite sufficient.


Viridia
For that "green" effect in your floral composition, try VIRIDIA. But use it sparingly! It is very powerful and, consequently, economical. From 1 to 3% is usually sufficient to modify a composition and obtain the desired effect. It may be used, also, to modify the floral note in bouquets or the citrus note in colognes and in cologne bouquets, toilet waters and lotions. It produces attractive, new and difficult-to-duplicate effects not ordinarily found in the latter types of preparations. Write us if you'd like a sample.

ONE BASI
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PLEASE TURN THE PAGE

NE BASE, WO MODIFIERS....

BESIDES supplying uniform, high quality basic terials to the perfumer, there is another interesting ase of our business that has important bearing on work. This involves the creation of synthetics, matic specialties and other odor-enhancing com-unds designed to lend added beauty and distinction his finished compositions. In our experimental per-ne laboratories, literally thousands of these complex terials have been developed over the past few years. ree of these—one, a delightful floral base and the ers, interesting modifiers—have been singled out for cial mention because of their adaptability to so many the present day types of odors. After reading more ut them on the inside page of this insert, we'd like to try them.

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OMETHING NEW....

AS A RESULT of special studies made by us to ve an odor problem stemming from the war, we are able to offer an important new group of aromatic tralizing agents whose wide adaptability should gest many interesting and profitable post-war appli-ons. Manufacturers are urged to look into the pos-lities and advantages of NEUTROSCENTS *now!*

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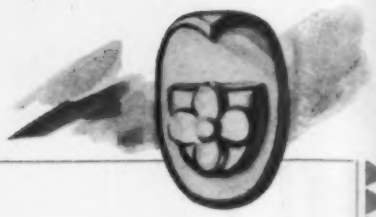
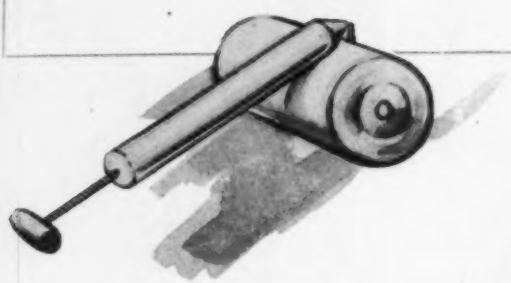


NEUTROSCENTS



THESE REFRESHINGLY NEW SCENTS are just what spray and deodorant manufacturers are looking for to give timely lift to their post-war sales. Designed to neutralize all traces of offensive odor and to substitute, instead, clean, fragrant and appealing scents, these interesting compounds open new fields of endeavor for the market-wise manufacturer. Consider just a few of the odorizing and de-odorizing uses to which NEUTROSCENTS may be applied and you will see that there is probably a niche in your future, if not your immediate manufacturing program, in which one or more of the present available selection of thirty distinctive NEUTROSCENT compounds may be employed. For example: hospitals, sick rooms, refuse disposal plants, smoking rooms, theatres, restaurants, kitchens, convention halls, institutions, wash rooms and countless others. Their use by every practical method of dispersion has also been carefully anticipated, i.e., by simple open receptacles, by spraying devices, by aerating and air conditioning machines and other dispersion and evaporation devices.

To anyone interested in the profit possibilities opened up by NEUTROSCENTS, we will gladly supply a bulletin which describes this entire group in full detail—odors, prices, uses, etc. You will receive this by return mail—and without obligation—for the asking.

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it the perception of the bait. An investigation of this benzene extract has been made and the following information has been gathered so far.

The substance is fairly stable, and is soluble in the usual fat solvents. This is a general property of powerful odorants which are almost without exception lipoid-soluble. It is somewhat volatile in steam, but under reduced pressure (in air) it is not appreciably volatile at 60° C. at 20 mm. residual pressure. It contains no basic or acidic groups. It is not readily hydrolyzed by alkali, not at all by dilute ethanolic potash, but is more susceptible to acid hydrolysis and is readily hydrolyzed and destroyed by dilute ethanolic hydrochloric acid. Saturation with hydrogen has a very unexpected effect. The attractant is unsaturated, and if saturated with hydrogen, then the hydrogenated material is about twice as attractive to the male gypsy moth as is the naturally occurring material. This is probably a significant feature. Another unexpected feature is that when the tips which have been exhausted by extraction with benzene are subject to acid hydrolysis, their activity is partially regenerated. When it is remembered that acid hydrolysis destroys the sex attractant itself, this behavior seems at first sight anomalous. No doubt further work will clear up the apparent anomaly. The substance has still to be completely analyzed, but it is possible it may be of the same class as muscone and civetone. If so, it is not improbable that this woodland pest may be worth breeding to provide the perfumer with a new fixative material. Human ingenuity will thus have made good a human blunder, for the gypsy moth began its career as a pest after a few escaped in the course of experiments by a French mathematician hopeful of being able to cross the insect with the silkworm moth to produce a hardy race of silk-producing insects.

Perfumes of Low Alcohol Content

In a commentary on Continental methods of making perfumes of low alcohol content, appearing in the July 1945 issue of *Soap Perfumery and Cosmetics*, it is pointed out that the excessive duties imposed upon the alcohol used in perfumery in most countries of the world has given rise to considerable research by experts chemist into the possibility of solubilizing perfumes in low-proof alcohols and in water.

The soluble preparations used in the trade have frequently been merely alcoholic solutions of 40-45° saturated with aromatic materials in such a way that these primary dilutions were soluble in their turn in low-proof alcohol or even in water. Other soluble perfumes were composed of powdered mineral salts easily soluble in water, charged with deterpenated essences under definite conditions, then again, other products in liquid form were obtained by a fixed dilution of deterpenated essences in diethylene glycol.

However, in addition to the fact that these products already constituted primary dilutions, all of them had certain disadvantages. The use of alcoholic solutions led to difficulties in transport, customs, monopolies and so on: the saline preparations produced lotions saturated with salts and were sometimes unpleasant. The admixtures with a diethylene glycol base introduced into the final preparation a quantity of glycol which modified the properties of the solvent.

Many of these disadvantages have been overcome by the use of newer, superior deterpened essential oils, which permit the use of lower alcohol concentrations than were previously possible. The possibility of fixing such solutions with fixatives soluble in water and in weak alcohol solutions has opened up interesting possibilities. However, the newer essences are not entirely and simply soluble in water and problems of clarity, odor fortification and the like must be solved by various means. Thus, the "sparkle" of weakly alcoholic solutions may be improved by adding a little diethylene glycol, where compatibility permits such an addition. Filtration may be needed to produce a perfectly clear liquid.

Massoia Bark Oil

Massoia bark oil, an interesting raw material of Australian origin, is discussed in considerable detail in an article in *S.P.C.* (18:404, 1945). The first researches on the essential Oil of Massoia Bark were carried out as far back as 1888, the oil then obtained had a pleasant odor, reminiscent of cloves and nutmeg. It had a specific gravity of from 1.040 to 1.065 at 15° C. Containing about 70 to 75 per cent of eugenol and some safrol, the yield of oil from the bark was about 6 to 8 per cent.

Some few years ago, the Imperial Institute undertook an examination of massoia bark oil. Two samples of bark were obtained, distilled, and the resulting oil examined. There appears to have been some little doubt as to the identity of the first sample of bark; the second was definitely identified as being that of *Cinnamomum Massoia*.

The second bark yielded 6.3 per cent of a pale yellow, limpid oil, having an odor of cloves and nutmegs. It possessed the following physical properties: Specific gravity at 15° C., 1.064; optical rotation, = 0.34; refractive index, 1.536. A chemical examination showed it to contain 79 per cent of phenols, consisting mainly, if not entirely, of eugenol. The oil freed from phenols distilled from 175° to 240° C., mostly between 225° and 230° C. The lower boiling fraction consisted mainly of terpenes, while the higher boiling fraction was chiefly safrole, the composition of the oil being approximately, eugenol 79 per cent, safrole 14 per cent, terpenes 7 per cent.

The first sample of bark yielded about the same proportion of oil, similar to the second in appearance and odor, but which contained only 60 per cent of phenols. It was suggested that the difference might be accounted for on the assumption that the second sample was older bark than the first.

At the close of the report published by the Imperial Institute it is suggested that the only commercial use of the oil would be as a source of eugenol, its suitability for this purpose being dependent only on the price at which it could be marketed compared with the prices of other oils rich in this substance.

Apart altogether from the question of employing the oil as a source of eugenol, several other useful applications suggest themselves. Pimento oil finds employment for modifying the odors of carnation oils and can often be substituted for clove oil in soap perfumery with pleasing results. Massoia bark oil might be similarly used, and seems to offer itself to manufacturing chemists specializing in perfumery, who are desirous of achieving novel results.

Furthermore, it is a distinctly useful material for the manufacture of bay rum, as an alternative to pimento oil, in combination with bay oil. The following may be taken as a basic formula permitting of numerous alterations and improvements:

Bay Oil	**0.25**
Massoia Bark Oil	**0.05**
Ethyl Acetate	**0.05**
Isopropyl Alcohol	**40.00**
Caramel	**q.s.**
Water	**to 100.00**

It is felt that Massoia oil has been somewhat neglected in the past and that its possibilities as a novel essential oil might well be more fully appreciated.

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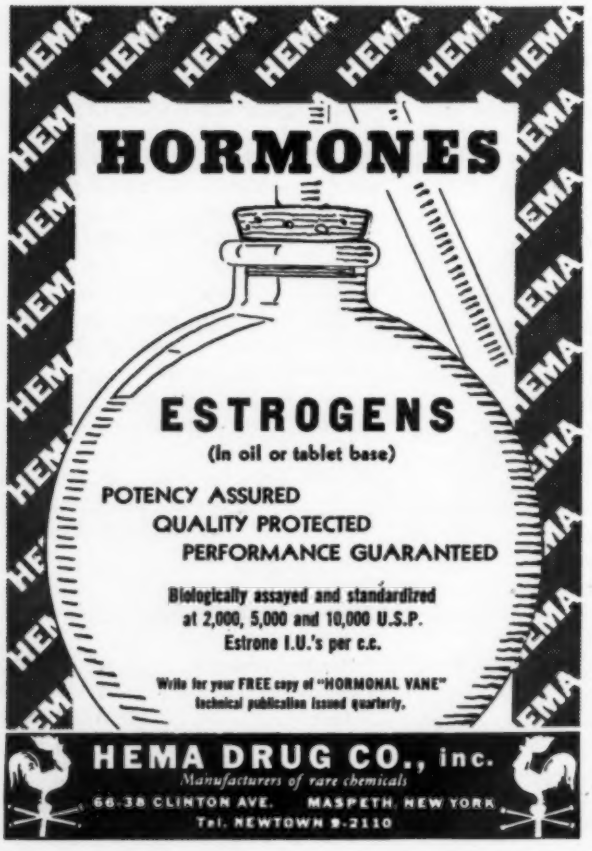
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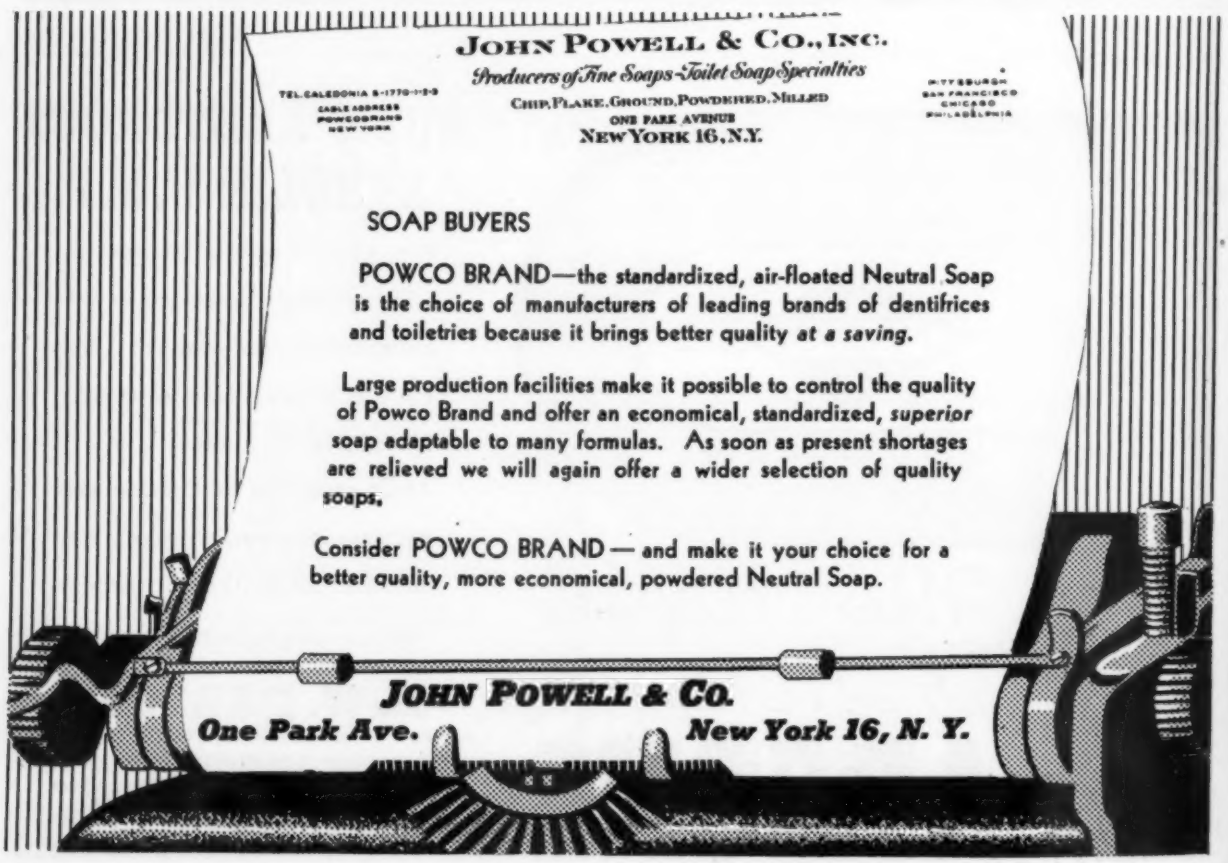

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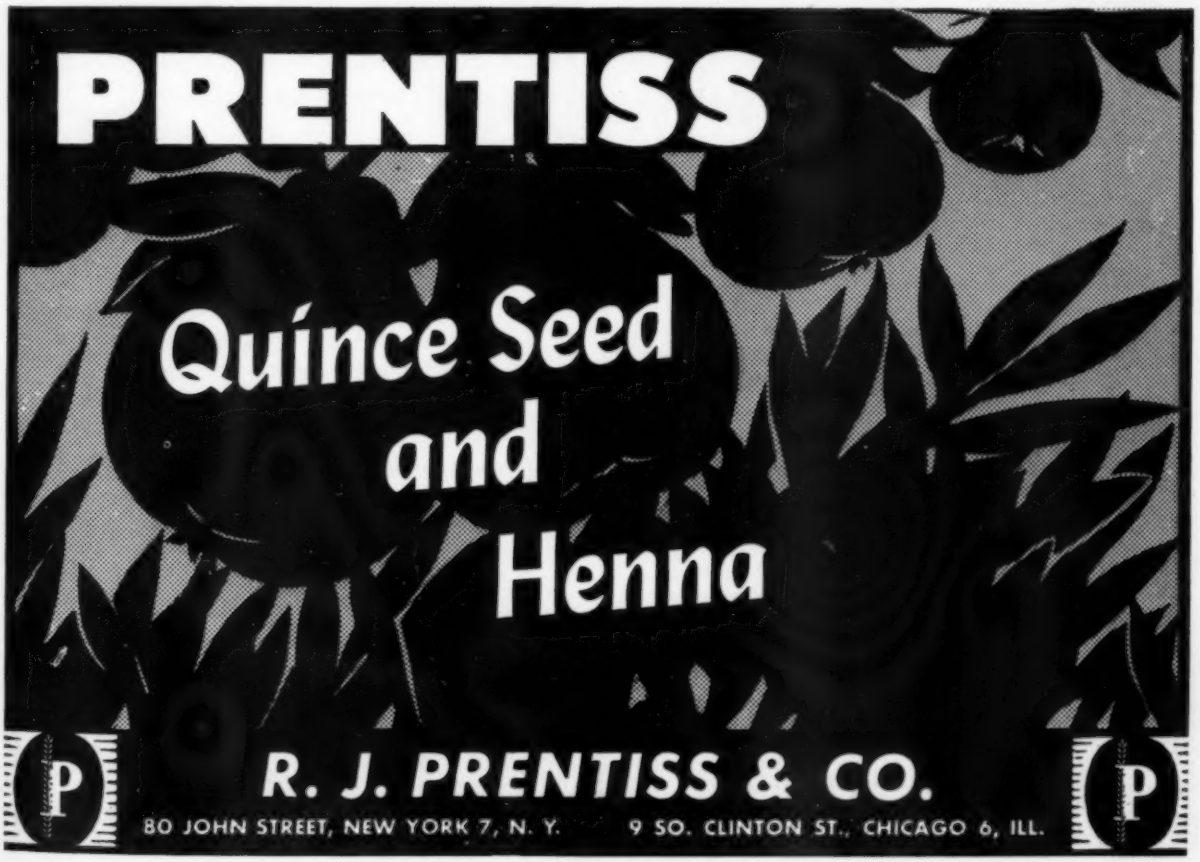

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READERS' QUESTIONS

LIP POMADE: I should like to prepare a lip pomade such as could be dispensed in the form of a lipstick, for preventing drying and cracking of the lips during cold weather. Hollis.

A stick to prevent chapping or irritation of the lips can be made by simply modifying a standard lip pomade by the inclusion of about one quarter of one per cent of menthol. A small amount of camphor may also be included but this is not absolutely essential. Such sticks are generally made without perfume or color, but color is not objectionable. A preparation, generally called "camphor ice" that has well-established use on the lips, consists of:

Powdered camphor	**20.0**
Light beeswax	**18.0**
Soft, white petrolatum	**15.0**
Spermaceti	**47.0**

HOSPITAL MOUTH WASH: Some time ago I noticed in some publication a formula for a so-called "hospital mouth wash." Do you think you could supply me with a formula for this preparation? Queens.

I presume that you are referring to the formula for a hospital mouth wash given in the "Pharmaceutical Recipe Book." This is made as follows:

Tincture of myrrh	**5 cc.**
Alcohol	**100 cc.**
Glycerine	**100 cc.**
Boric acid	**10 Gm.**
Distilled water to make	**1,000 cc.**

Dissolve the boric acid in 500 cc. of distilled water. Mix the tincture of myrrh, alcohol and glycerine and add to the boric acid solution. Add sufficient distilled water to make the product measure 1,000 cc. Filter if necessary.

PRE-ELECTRIC SHAVE LOTION: Could you give me the formula for a couple of men's face preparations to be used before shaving with an electric razor? This should be a true solution and not an emulsion, either with or without alcohol. I understand that they have been made with about 80% alcohol. Omaha.

A simple solution for this purpose which "sets up" the hair prior to shaving, consists of:

Alcohol	**50.0**
Water	**50.0**
Aluminum chloride	**0.5**
Color and perfume	**to suit**

This is applied to the face and allowed to dry before using the electric shaver. I hardly think that a concentration of alcohol as high as 80% is desirable or necessary.

"CHIP" IN HAND CREAMS: We would like to produce more "chip" in a hand cream formula. By "chip" we mean the way a cream crumbles or slips when the finger is pushed directly into the jar of cream or the cream is forced up by plowing the back of the finger nail rapidly through the cream. An example of this may be seen by pushing the finger through the cream in Simonized wax. Some literature suggests the use of myristic acid in place of stearic, for producing this effect. Do you know of any way we can increase this "chip" without increasing the myristic acid? Boston.

This "chip," as you call, appears to be largely a question of crystalline structure. It seems to me that a higher melting, harder grade of stearic acid might solve your problem. The best triple pressed stearic acid is what I have in mind. It is also possible that the addition of a small proportion of a fairly brittle, hard paraffin or other wax might aid in obtaining the desired effect. I do not believe myristic acid will serve because it produces a softer mass.

FOOT BALMS: We would appreciate it very much if you can help us out with the formula of a foot balm with a vanishing base. Brooklyn.

Foot balms or creams of the vanishing base type must be made according to the type of active ingredient incorporated, because the question of compatibility is a very important consideration. Merely as an indication of this type of preparation I am giving you the following formula:

Glyceryl monostearate	**20 Gm.**
Glycerine	**5 Gm.**
Paraffin oil	**5 Gm.**
Formaldehyde solution	**15 cc.**
Water	**55 cc.**

Melt the ingredients together and stir until cold. The solution of formaldehyde in the above may be replaced by a solution of any other *compatible* active ingredient.

A standard foot balm which is not too greasy may be made along the following lines:

Zinc oxide	**5.0**
Cetyl alcohol	**5.0**
Lanolin absorption base	**30.0**
Petroleum jelly	**27.0**
Water	**20.0**
Camphor	**2.5**
Thymol	**0.3**
Menthol	**0.2**
Alcohol	**10.0**

Melt together the absorption base, cetyl alcohol and petroleum jelly. Dissolve the camphor, thymol and menthol in the alcohol. Stir the water gradually into the base, then add alcohol, and finally grind in the zinc oxide through an ointment mill.

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NICOTINE STAIN REMOVER: Several months back I noted a formula for the removal of cigarette stains from the fingers, containing pumice plus waxes and solvents. The point is that I very carefully cut the formula from the magazine and then lost it. I would like very much to have you repeat this formula for me as I wish to work with it. Lincoln.

Here is the formula you indicate as the one wanted:

Beeswax	**10.0**
Paraffin	**5.0**
Mineral oil	**46.0**
Pumice	**8.0**
Borax	**0.5**
Water	**30.0**
Perfume	**0.5**

BUBBLING BATHS: We would appreciate receiving a formula for an A-1 bubbling bath. Brooklyn.

According to Chilson, a foaming powder for use in the bath may be made from:

Sodium bicarbonate (dry)	**30.0**
Tartaric acid (dry)	**17.0**
Borax (dry)	**5.0**
Lauryl sodium sulfate (dry)	**47.0**
Perfume	**1.0**

Another simple preparation of this type, a foamy bath powder, consists of:

Saponin	**15.0**
Sodium lauryl sulfate	**82.0**
Perfume	**3.0**

SODIUM MYRISTATE: In reviewing my back numbers I came across a very interesting subject, "The Cosmetic Manual"—32 shampoos by Joseph Kalish in the March 1940 issue on page 280. In the first column, third paragraph from the bottom, Mr. Kalish mentions "sodium myristate." Is this a synthetic detergent? Rahway.

Sodium myristate is the salt produced by saponifying myristic acid with sodium hydroxide. Myristic acid is one of the fatty acids obtained from coconut oil, and is one of the constituents responsible for its high lathering properties. It is not a synthetic detergent and it is not a trade name item, but rather a pure chemical substance. It is available as such from several sources.

LIQUID BRILLIANTINES: One of my clients wants a formula for an oil for slicking the hair, preferably something simple. Can you oblige? New York.

Liquid hair oils, which are preferred by women because they are so easily applied, can be made by the use of a suitable light, white mineral oil containing about one per cent. of a suitable perfume. Men prefer a more viscous product such as the following:

White paraffin	**15.0**
Spermaceti	**4.0**
Stearic acid	**10.0**
Light mineral oil	**70.0**
Perfume	**1.0**

CAKE MAKE-UP: With a view to launching cake make-up for our market, we have been guiding ourselves on nothing but the examination of products of some accredited American firms and on one or two articles appearing in your publication. Unfortunately despite our efforts, we have not been able to obtain satisfactory results. As old subscribers, we take the liberty of applying to you for information to kindly instruct and guide us in the composition and manufacturing processes to obtain a perfect quality product. Barcelona.

A comprehensive discussion of cake make-up was written by H. Hilfer and appeared in our March 1944 issue. From your letter I presume that you have probably read this article. Aside from this article, very little has been published in the technical literature on the manufacture and formulation of cake make-up. The original patent granted for such products, U. S. Patent 2,101,843, December 14, 1937, described such items in considerable detail and I would suggest that you get a copy of this patent because of its wealth of information. A copy may be obtained for 10 cents from the Commissioner of Patents, Washington, D. C.

PENICILLIN PASTILLES: I am especially interested in the item on penicillin pastilles in oral infections which appeared in your February 1945 issue. In this article it is mentioned that detailed instructions for making these pastilles were described in the "Pharmaceutical Journal." Would it be possible for me to get information on the method for making these products? New York.

The instructions for making these pastilles as given by L. L. Martin are as follows:

Gelatin (in powder)	**440 grains**
Nipagin M	**2½ grains**
Simple syrup	**2 fl. oz.**
Distilled water	**2 fl. oz.**

The most suitable size pastille was found to be one having a surface area of 1 sq. cm. with a thickness of 0.5 cm. The quantities given in the above formula provide sufficient base for 200 pastilles. A suitable mould for preparing a batch of 100 pastilles was made 10 cm. by 10 cm. by 2 cm. deep. The penicillin issued for the preparation of pastilles was always in the form of the sodium salt, dissolved to give a strength of 10,000 units per mil (i.e., 2.5 or 5 mils of penicillin solution for 100 pastilles, or 250 or 500 units per pastille.) The method of preparation is designed to prevent any risk of overheating the penicillin and thereby destroying part of its activity. For this reason, the penicillin solution is never mixed with the base until the temperature has fallen to 43° C.

Nipagin M specified in the above formula, is the name of a proprietary preservative and probably any preservative in the same class will serve. While a preservative may be necessary in large scale production, pastilles containing penicillin but no preservative were kept over a period of three months and showed no signs of deterioration.

LANOLIN: I would appreciate it if you would clear up a point in question on the use of lanolin. In cosmetic formulas calling for lanolin, which is generally used, the hydrous or anhydrous type? Hoboken.

When the word lanolin is used alone it generally refers to hydrous lanolin unless otherwise specified. This is the procedure also used in the U.S.P.

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The facilities of this great plant and research laboratories will be available upon our release from government contracts. In the meantime, investigate, and let us help you prepare for postwar cooperation.

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Menthol at New Low Level Approaches Pre-War Price; Two Year Penicillin Shortage Seen

Menthol wrote the price news in the market for fine chemicals during the past month. The spot market was lower at under $4 and possibly as low as $3.75 a pound. Some factors in the market viewing the continuously quick depression of prices, are disposed to hold aloof from offering until such time as distressed lots of merchandise have been taken from the market. With the arrival of additional lots of menthol from Brazil the price is now within sight of the normal value for that article—about $3 per pound. Hanging over the market in the form of potential developments are the return of Chinese and Japanese menthol to the world market. Very large production in Brazil added to the possible production in China and Japan is no tonic for a depressed market. Domestic producers of synthetic USP racemic menthol reduced prices to $4 to $4.65 per pound.

Henry W. Spielman, serving as Agricultural Economist, Office of the United States Consulate General, Sao Paulo, Brazil, writes that menthol production in Brazil began in 1936, when a few pounds of oil were distilled on an experimental basis. In the 1942-43 season production had increased to 88 short tons of oil, and by the 1943-44 season to approximately 385 tons. Estimates for the 1944-45 season indicate the production of between 440 and 550 tons.

A large part of the menthol production is in the hands of Japanese growers, he states, approximately 200,000 of whom live in the state of Sao Paulo, where most of the menthol is produced. A large part of these Japanese migrated to Brazil following the Tokyo earthquake of 1923. They are believed to have brought with them from Japan some of the mint plants which have been used for establishing this new industry.

At the present time there are approximately 20 menthol manufacturers in the State of Sao Paulo. Many of these producers operate home industries and are still struggling to perfect their processes. During the past year a few bankers and wealthy industrialists have gone into the business, have set up modern crystallizing plants, and, because of the uncertainty of obtaining oil from growers during the past two seasons, have gone into the production of their own mint oil. Most of the plants follow the freezing technique for obtaining menthol crystals. The larger menthol manufacturers operate their own export organizations and are represented by agents in the United States. There are also many independent exporters in the cities of Sao Paulo, Santos, and Rio de Janeiro who purchase their requirements from small local manufacturers and ship the crystals like any other export commodity.

Mr. Spielman goes on to state that during the first 3 years of menthol production in Brazil many manufacturers were attracted by the high prices of the product and the exceptionally large profits that could be made. Encouraged by orders for 330 short tons of menthol, representing some 660 tons of oil, growers greatly expanded their acreage for the crop which would be harvested from December 1943 to May 1944. This quantity was probably too much to expect, when the production the year before had been only 88 tons of crystals.

Total production of the 1943-44 crop actually amounted to about 385 short tons of oil, 200 tons of menthol. Most of this amount went to the United States. Recent estimates indicate that the 1944-45 crop may amount to between 440 and 550 short tons of oil, or between 220 and 275 tons of crystals. Although the acreage for the present season was somewhat larger than the year before, the yield per acre for the 1944-45 harvest will probably be lower because of the droughts during the first months of the growing season.

Recently the trend has been toward concentrating menthol production in the hands of a few well-organized manufacturers who produce a dependable, uniform product. Several of these manufacturers have started their own plantations of mint so that they can have their own oil supply. These producers hope to hold the United States market after the war, even in the face of more cheaply produced menthol from the Far East, according to the report of Mr. Spielman.

SEPTEMBER PRICE CHANGES

UP

Celery oil $1
Citronella oil Ceylon 40c
Cohosh root 3c
Elder flowers 5c
Geranium oil African 50c
Bourbon 75c
Karaya gum 3c
Saffron Spanish $1
Sarsaparilla root 12c
Senega root 25c
Senna Tinnevelly 2c
Soap bark crushed 3c
cut 2c

DOWN

Belladonna leaves 8c
Bergamot oil $1
Buckthorn bark 11c
Lemon grass oil 5c
Menthol Natural $1.75
Mercury $34
Peppermint oil Natural 25c
Redist. 25c
Senna Alex 4c
Spearmint oil 10c
Tragacanth gum No. 1 10c

• **Prices quoted in this section were current on the first of this month.**

Penicillin Shortage Seen

Although the war is over and military demand is dwindling, America's producers of penicillin, working at capacity and constantly expanding production,

(*Continued on page 553*)

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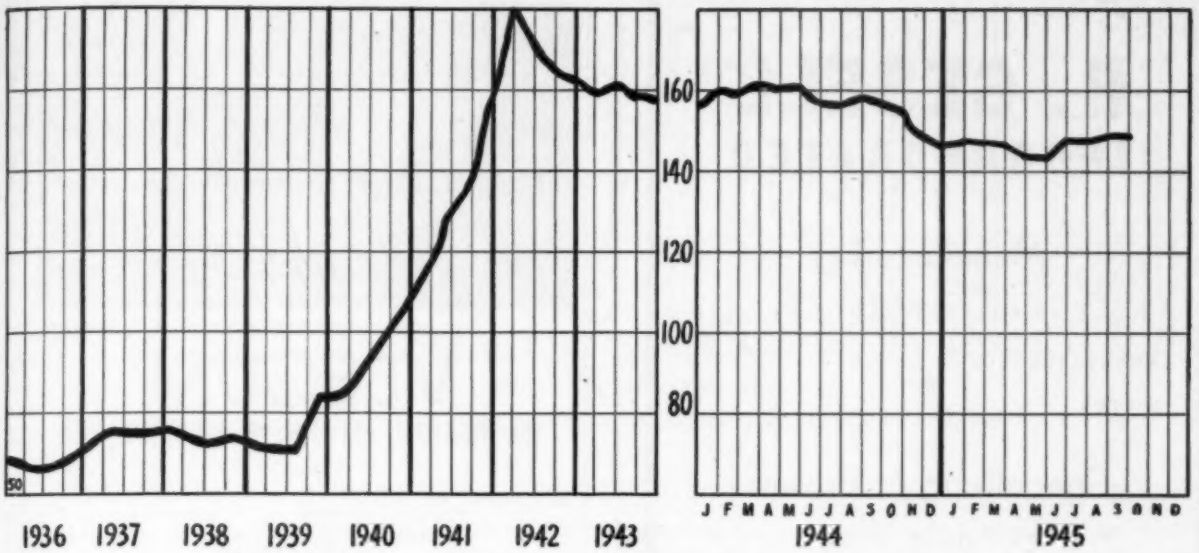
50 Raw Materials—Weighted Price Index. 1926=100.



The price index of fifty commodities for September declined fractionally from 151.8 to 151.5.

Million Dollar Cargo of Vanilla Arrives From Madagascar; Ceiling Prices Stall Carnauba Trading

The first direct steamer from Madagascar in several years with a good tonnage of vanilla beans aboard arrived here during the past month. The vanilla cargo is estimated at between $1,000,000 and $1,500,000. This material, it is pointed out, arrived on a poorly supplied market with the result that very little goods remain unsold.

Recent rains in Mexico have helped the crop there to the extent that latest authoritative estimates are between 110,000 to 120,000 pounds of vanilla beans, whereas back in June it was believed that the crop would only total 80,000 pounds. Normally the Mexican vanilla crop ranges between 350,000 to 400,000 pounds.

During the first quarter of 1945, exports of vanilla beans from the Society Islands, French Oceania, amounted to 17,257 pounds, valued at $37,380.58, a large decrease as compared with the corresponding period of 1944, according to customs authorities at Papeete.

Ceilings Hit Carnauba

Trade in carnauba wax remains at a standstill. Although the war is at an end, local importers declare they are still unable to purchase goods in the primary center because of ceilings. Few if any purchases have been possible in Brazil since last February and although the coming crop of carnauba is expected to be large, late advices from the primary center tell of purchases for the account of Canada, European and miscellaneous countries 5c a pound above our present import ceilings.

Normal imports of carnauba wax in the United States run between 6,000 and 8,000 tons annually. OPA is unwilling to grant any increase in import ceilings, explaining that present prices are already well above normal.

Miscellaneous

More favorable prices are quoted on lycopodium. Spot prices on gum arabic are fractionally higher. There was a substantial advance in balsam fir because of reduced offerings from Canada. There is considerable interest shown in ipecac root. No shipments have come into this market from Rio for many months and it is difficult to obtain a clear picture regarding conditions in the primary center. Advices reaching the Department of Commerce from the Far East indicate that the Japanese have not done much damage to the cinchona plantations in the Netherlands East Indies. Some ergot is expected to arrive shortly at a more reasonable price. Elder flowers are firm. Collections of most domestic botanicals have proved very disappointing this year. Cascara is in a decidedly firm position and likely to remain so for some time. Quotations on all grades or ribbon tragacanth are lower. Demand is reported sluggish.

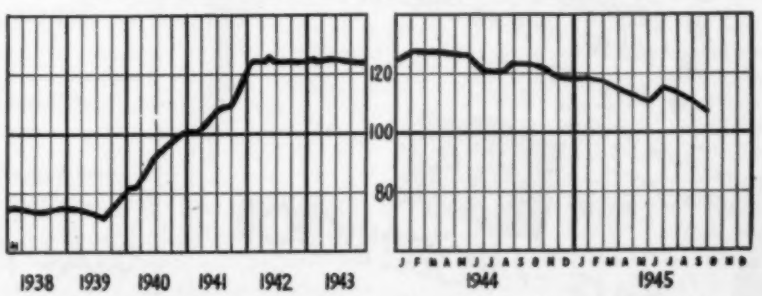
FINE CHEMICALS

(Continued from page 551)

are under greater pressure to meet overall demand than at any time since mass production was developed.

Representative penicillin producers

15 Medicinal Chemicals—Weighted Price Index. 1926=100.



The medicinal chemicals index declined from 125.7 to 122.1. Menthol was lower at $3.75; mercury dropped to $91.

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report that despite a monthly total production of 700,000,000,000 (Oxford) units, or twice what it was last year, penicillin is in extremely short supply. Every producer is straining to manufacture more of the drug, and substantial additions to existing capacity are planned to bring production within the next several years to the fantastic level of 100,000, 000, 000,000 units. Production last year averaged 200,000,000,000 to 250,000,000,000 units monthly, or less than half of the 700,000,000,000 unit monthly current output.

Three major reasons are given for the penicillin shortage: 1. America is practically the sole producer of penicillin in a world that is finding increasing uses for the drug and is placing growing orders for it here. 2. Domestic demand is growing by leaps and bounds because doctors are becoming more familiar with its applications and oral use requires three or four times as much penicillin as injection intravenously or intra-muscularly. Penicillin use is also broadening and has found its way into dentistry, and into veterinary medicine. 3. Penicillin producers have not been able to expand production as rapidly as they had hoped because of difficulties encountered in handling crude materials such as corn steep and others.

The export market for penicillin is making veterans in the pharmaceutical and drug trade rub their eyes in amazement. From China and India, from Russia, the Pacific Islands and from every corner of the world orders for penicillin are flowing to the United States.

Plants are being rushed overseas, and England may join America early next year in supplying world demand. As yet, however, England—where penicillin was first discovered—is still producing penicillin in bottles as against the deep vat, mass production methods employed in the United States. Two plants are being built in England with the help of American penicillin producers. On completion they will produce monthly about 100,000,000,000 units of penicillin each—although this output can be speedily expanded just as American companies increased their production once the manufacturing process was set up.

Canada has a small volume of production, but until additional plants are built, the world must continue to look to the United States for penicillin.

It is felt here, therefore that the penicillin shortage will persist for at least one or two years—until plant expansion here and abroad begins to catch up with the heavy demand.

Meanwhile, producers here assure consumers that domestic demand will not be slighted, nor will there be any need for allocating or rationing the available penicillin supply. There will be sufficient penicillin to meet domestic needs for penicillin applied intravenously or intramuscularly. Because of the tight supply situation, however, producers of penicillin lozenges, salves and other applications other than for injection subcutaneously may not be able to get as much of the drug as they would like.

Government control over the production and distribution of penicillin was removed some time ago, and individual producers have been left free to cope with their individual problems of how much to produce and where to distribute it. Since the demand keeps mushrooming, the decision of most producers has of course been to build up additional capacity as fast as they could.

One indication of the rate at which the larger producers of penicillin are stepping up their output is given by the record of Charles Pfizer & Co., a pioneer in mass production of penicillin. Pfizer is now producing some 200,000,000,000 to 225,000,000,000 units of penicillin monthly or just about as much as the entire industry of some 17 manufacturers produced monthly last year.

Mercury Down

Termination of the Government's battery program, liquidation of Mexican metal, and a generally reduced demand for derivative manufacturers have forced mercury prices down to $91 a flask on spot. About a year ago the market was close to $200, and only early this year the metal was at $175 to $180. Although it is estimated that there is 100,000 flasks of mercury held in the Government stockpile, this material is largely frozen by the Stockpile Act and can be sold only at a few dollars above the market. The stockpile, it is explained, is equivalent to a year and a half supply during a war period and a five years' supply during peace times. Normal ten-year average price prior to the war was $75 per flask.

Some fairly large shipments of Spanish mercury have been received here in recent months but the price in Spain has failed to decline to any great extent. It is understood that offices of the Spanish and Italian mercury cartel are still located in Rome, and it is quite possible these countries will again assume their former position in world trade.

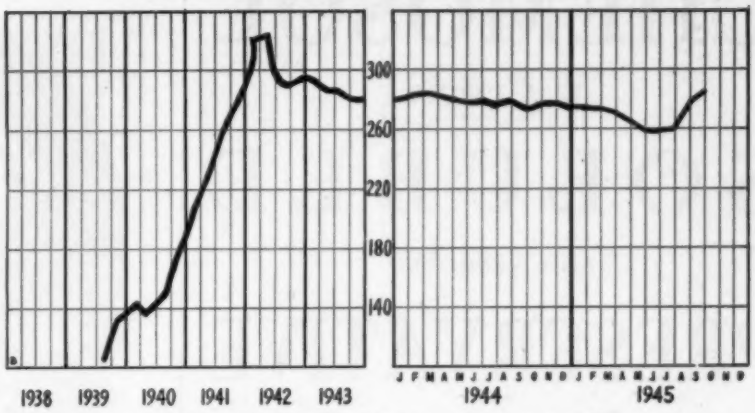
While it is anticipated that manufacturers of mercurials will shortly take into consideration the lower market price of the raw material, no action has been taken at this writing.

Norway Sends Cod Liver Oil

Arrival of Norwegian medicinal cod liver oil, the first since the invasion of that country in April, 1940, was a welcome development during the past month. It is understood that there was 240 drums of cod liver oil aboard the Stavangerfjord that arrived at a Brooklyn pier. The steamer is reported to have sailed from Oslo August 25 and it is generally believed increasing quantities will be arriving from that country in the future.

Exports of cod liver oil from Norway to the United States although higher than normal back in 1939 had already dropped in January, 1940, to 60,284

15 Botanicals—Weighted Price Index. 1926=100.



The botanicals index advanced from 281.6 to 284.5. Belladonna was lower at 72 cents; senna advanced to 14 cents.

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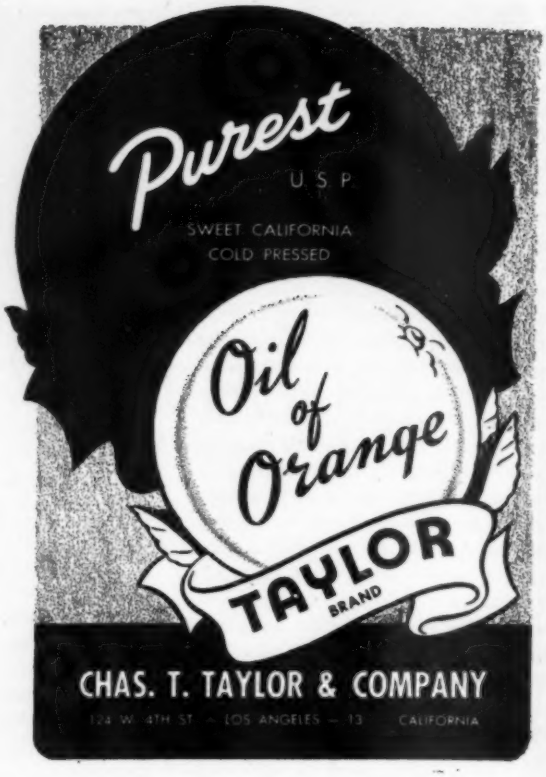

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gallons, compared with 207,914 gallons in January, 1939.

As far as can be learned the only current obstacle in obtaining replacements of oil is the matter of credits but it is hoped that this situation will shortly be corrected. There is a good quantity of oil reported available in the primary center. Since not more than 5 per cent of a normal domestic consumption is produced in the United States, imports afford a fair measure of requirements. For many years Norway was the chief source for cod liver oil imported into the United States but just prior to 1939 it lost its predominant position. Iceland and Newfoundland have become increasingly important as exporters but it is understood that UNRRA's requirements have taken a good portion of the recent production in Iceland.

Following the outbreak of hostilities in Europe, unusually large quantities of oil were rushed to the United States from Norway but as prices began to rise American buyers withdrew from the market. Total exports of medicinal oils from Norway during February, 1940, totaled 227,940 gallons against 173,820 gallons during the corresponding month in 1939.

Shark Oil In Ceylon

The Ceylon Department of Commerce and Industry has been investigating the possibility of developing a local shark-oil industry, reports the British press. It is stated that a pilot factory for the manufacture of the oil was set up in September 1944, and since then about 1,225 gallons have been supplied to hospitals on the island. Estimates place the amount of fish liver, chiefly shark, available from the coastal regions of Ceylon at about 1,200,000 pounds annually.

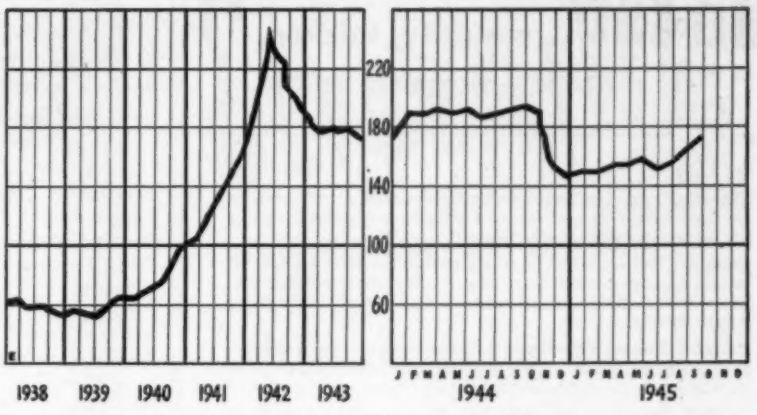
Rise In Glycerin Output

Increase in the allotments of fats for household soap as announced by the War Food Administration will, according to estimates in the trade, provide an additional glycerin production of between 8,000,000 and 10,000,000 pounds over the final quarter of the year. There is a good demand for glycerin. A good movement is continuing for explosives and indications seem to point to a heavier buying movement for the account of the protective coatings trade, cosmetics and pharmaceuticals.

Quinine Price Adjusted

Adjustments in prices of the major quinine salts to include the extra transportation charge of 13½c an ounce was made during the current trading period. All quinine that had previously been sold had been subject to an extra charge of 13½c an ounce to cover extra transportation costs on cinchona bark from which it is made and in keeping with an approval from the Office of Price Administration, major producers have adjusted selling schedules on both quinine sulfate and quinine hydrochloride to include the extra charge.

15 Essential Oils—Weighted Price Index. 1926=100.



The essential oils index advanced from 161.3 to 164.7. Bergamot was lower at $10; citronella jumped to $1.65; geranium rose to $17; peppermint was $6.75.

ESSENTIAL OILS

Contrary to the many rumors circulating in the United States no flower plantations in France were plowed under for other uses and no plantations were destroyed. It is generally believed, however, that all plantations are in subnormal condition due to the lack of fertilizer, insecticides, fungicides and labor. A large percentage of the jasmin plantations are between twenty and twenty-five years old, which means at their life's end. Weather conditions in France in 1944 caused poor crops so that no carryover of floral products existed at the beginning of 1945.

Peppermint Production Canada

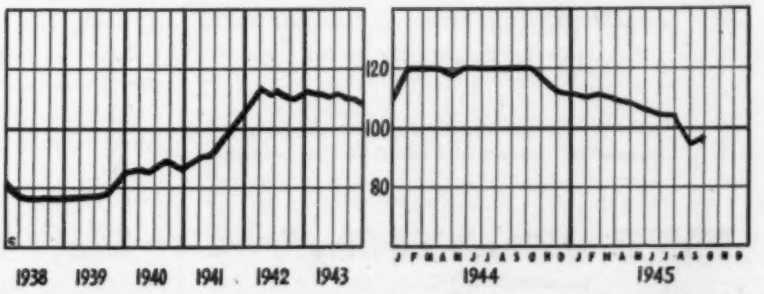
Peppermint is being grown in Kent County, Ontario, Canada, by a few specialized growers, total production in 1944 being 5,000 pounds of peppermint oil.

Italian Lemon Crop

Italy, which for many years was one of the world's foremost producers of lemons, will have one of the smallest crops in decades this year. Production is estimated at 2,097,000 metric quintals, or about 6,082,955 boxes of 76 pounds each, a decrease of approximately 6 per cent as compared with the small 1944 crop of 2,231,000 quintals, or about 6,471,660 boxes.

The principal factors which have brought about the decline in lemon production in Italy and in Sicily are: (1) The ravages of the Mal Secco disease; (2) the physical damage, disorganization of supply, and other disruptions following in the wake of war; and (3) an unseasonably hot, dry spring.

25 Cosmetic Raw Materials—Unweighted Price Index. 1926=100.



The cosmetic raw materials index advanced from 99.1 to 100.1. Balsam Copaiba advanced to 90 cents; menthol was lower at $3.75; tragacanth gum was down to $3.80.

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Vitamins Still Mean Dollars

(*Continued from page 459*)

3. *If you were to purchase vitamins for other members of your family, what reasons would lead you to obtain one brand instead of any other?*

	Total		*Male*		*Female*	
	No.	*%*	*No.*	*%*	*No.*	*%*
Number of persons answering	372		128		244	
Number of replies	432	100.0	147	100.0	285	100.0
Doctor's recommendation	134	31.0	48	32.6	86	30.2
Product I use	106	24.5	32	21.8	74	26.0
Formula of product	30	6.9	10	6.8	20	7.0
Manufacturer's reputation	25	5.8	13	8.9	12	4.2
Advertising	24	5.6	6	4.1	18	6.3
Druggist's recommendation	22	5.1	5	3.4	17	6.0
Friend's or relative's recommendation	16	3.7	3	2.0	13	4.5
Quality of product	10	2.3	6	4.1	4	1.4
Price	5	1.2	3	2.0	2	.7
Other reasons given	15	3.5	7	4.8	8	2.8
Wouldn't buy unless directed	7	1.6			7	2.5
Don't know	38	8.8	14	9.5	24	8.4

Much has been said about which income groups use vitamins. A recent analysis by a Milwaukee newspaper[4] indicates that the use of vitamins increases in direct relation to incomes with a top of 35.3 per cent in the upper income group and only 23.4 per cent in the lower bracket.

The following table shows the users of vitamins by income groups:

Group	*Per Cent*
$50 rent and up	35.3%
$40 to $50 rent	27.5%
$30 to $40 rent	27.8%
Under $30 rent	23.4%

The Physician Looks at Vitamins

A recent survey by "Modern Medicine"[5] revealed that:

1. 85 per cent of physicians prescribe vitamins routinely or occasionally for patients over 65 years of age.

2. 58 per cent prescribe vitamins in amounts larger than those recommended by the National Research Council.

3. 86 per cent either write prescriptions or suggest a specific brand.

The chart on page 459 is of particular interest for studying how physicians use vitamins.

Children Need Vitamins

A study of the recent medical literature reveals an increasing awareness of the value of vitamin supplementation. In a J.A.M.A. editorial,[6] it was pointed out that the part played by nutritional disorders in the rejection of young men for military service has focused

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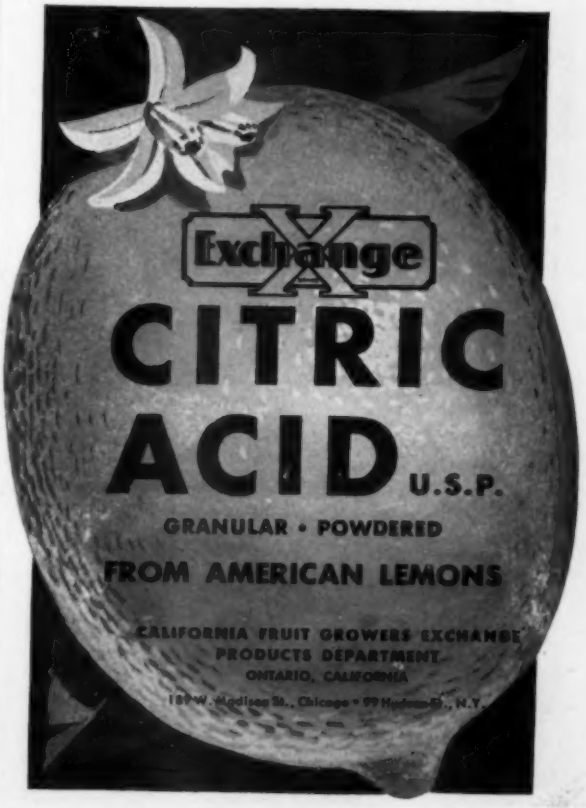

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attention on the importance of adequate nutrition during the growth period. The article cited two interesting studies to emphasize the need for directing attention to proper diets for children. The first study was conducted by the Florida State Board of Health which was undertaken early this year in various counties throughout the state. It was learned that in some sections well over 50% of the children showed at least slight signs of rickets, and also indications of vitamin C lack. It was reported that in one isolated rural area 50% of those examined had gum signs indicative of a lack of vitamin C. Signs of vitamin A deficiency as determined by roughened skin or granulated eyelids, reveal that as many as 64% are in need of this vitamin. It was also learned that as high as 85% were in need of riboflavin.

In addition to the clinical data accumulated by the Florida State Board of Health, attention was also given toward determining the types of foods eaten by the school children. The study revealed a lack of citrus fruits, vegetables and milk from the diets of a large portion of the children questioned. In addition, the reports showed that many children go without one meal during the day usually breakfast, or eat a breakfast which is totally inadequate.

The second study, conducted by the "Ladies' Home Journal", revealed similar dietary weaknesses. Here again it was learned that a discouragingly high percentage of children from all types of homes received meals which were poorly balanced.

Both the Florida and "Ladies' Home Journal" studies stress the need for turning over a new leaf in the feeding of our citizens of tomorrow. As pointed out in the J.A.M.A. editorial, "these studies show that many children are not receiving their share of the benefits of this country's resources in the way of good foods for the maintenance of good nutrition."

Breakfast Habits

A study by the Home Makers Guild of America[7] reveals some interesting American breakfast habits: 1. 47% of the families eat a hurried breakfast. 42.3% of the husbands take only 10 minutes for their morning meal, while 55.8% of the children take about 20 minutes for breakfast; 2. 40.5% of those interviewed use vitamin supplementation regularly and 74.8% take vitamins at breakfast.

This study confirms our own observations. The push and shove of modern living is making it necessary to eat hurried meals, especially breakfast. It encourages the eating of too many rich, filling, easy-to-eat foods. It is no wonder that subclinical deficiencies are so common. Education as to proper food habits is most essential. Vitamin supplementation should be used as indicated.

The Over 40 Age Group

Dr. Vannevar Bush, Director of the Office of Scientific Research and Development, pointed out in his report "Science, the Endless Frontier"[8] that "In the period

1900 to 1942, the average life expectancy of the American people increased from 49 to 65 years, largely as a result of the reduction in the death rates of infants and children. In the last two decades, the death rate from diseases of childhood has been reduced 87%.

"This reduction in the death rate in childhood has shifted the emphasis in medicine to the middle- and old-age groups, and particularly to the malignant diseases and the degenerative processes which are prominent in the later decades of life..."

Tuohy[9] is of the opinion that within the next generation the United States will have some 22,000,000 people over 65 years of age in the population. This possibility presents a social and economic challenge which will have to be dealt with. It is thought that the hope of making our older age group comfortable and economically productive will be dependent upon sound nutritional health. In other words, well balanced diets beginning in childhood and extending throughout life will probably be the key to a healthy, fruitful life. Vitamin supplementation is of real value to the forty and over age group. It is well worthwhile to call the physician's attention to the nutritional shortcomings of the aged.

Pregnancy

Studies by Burke, et al.[10,11] have shown the importance of adequate nutrition during the prenatal period. These investigators have revealed that: 1. the diets of pregnant women are rarely sufficient to meet the needs of the body during this period, and 2. there is a definite relationship between the prenatal diet and the condition of the newborn.

The importance of adequate vitamin intake during the pregnancy is readily recognized, but it is frequently necessary to remind the medical profession of the continued shortcomings of the pregnant woman's diet.

That Tired Feeling

Interesting studies have been conducted recently at the Mayo Clinic and Harvard Fatigue Laboratories showing the need for B complex supplementation.

The Harvard group [12,13] examined the effects of B complex deficiency in men engaged in sedentary occupations compared to those doing manual labor... They learned that it is necessary, especially in those doing manual labor to have a continuously high intake of the B complex group. Symptoms of B complex deficiency manifest themselves within one week on a B deficient diet in the laborer and four weeks in those subjects engaged in sedentary occupations. Tiredness and inefficiency at work were prominent complaints.

Williams and Mason[14] at the Mayo Clinic studied women on a diet low in thiamine and noted that after only 15 days on an inadequate B1 intake irritability, depression and fearfulness were quick to manifest themselves.

Vitamins in Industry

One of the most authoritative and well controlled studies[15] yet reported was published recently by the

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Milbank Memorial Foundation. The study described the effects of vitamin supplementation on turnover, absenteeism and personnel ratings of workers at the great Lockheed Aircraft Plant in Los Angeles. The investigators revealed that multivitamin supplementation: 1. Reduced absenteeism; 2. Improved performance; 3. Decreased labor turnover.

The study was conducted over a period of one year with proper controls, and a sufficient number of subjects to make it statistically significant.

In conclusion, an analysis of the 1945 vitamin market reveals that: 1. Vitamins mean big business. According to "Drug Topics" 2. Vitamin sales for 1944 were up 1.5% and package sales had increased 19.4%. 3. The physician is the key to the vitamin market. 3. Recent studies indicate a growing need for vitamin supplementation in pregnancy, old age and in children. In addition, finicky food habits and the pace of modern living also make it necessary to consider supplementing inadequate diets with vitamins.

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DEODORIZED ALCOHOL: I have several creams on the market and would like to produce toilet water, eau de cologne, etc., but I have heard that the alcohol has to be deodorized. Please tell me how to do that. Also, how to take away the bad odor of castor oil, cod liver oil and turtle oil. Guatemala City.

In the United States most commercial producers of alcohol also prepare a highly purified grade of alcohol made especially for perfumery use and perhaps it might be advisable for you to contact one of these. However, in view of possible taxes, shipment and like difficulties, I might mention that passing alcohol through activated charcoal helps to remove much of the objectionable odor.

With regard to your other question concerning the deodorizing of castor oil, cod liver oil and turtle oil, I regret that I have no information on suitable procedures. However, deodorized grades of castor oil are available in this country. In addition, it might be mentioned that many of our perfume houses have prepared really excellent products for covering undesirable odors of certain cosmetic ingredients.

What Salesmen Should Know About An Income Tax Return

(Continued from page 469)

misused as a loophole by the unscrupulous. So far as humanly possible, the salesman should make an effort either to pay by check or get receipts or both for all sales expenditures. Only in this way may he be sure he has protected himself against an item being disallowed.

It should be noted that failure to take any of these items in past income tax returns does NOT make it permissible to include such oversights of previous years in a current return, ie: 1944 car depreciation may not be taken in a 1945 return and would be disallowed.

Depreciation rate on salesmen's cars may be as high as 33⅓ percent a year. Disadvantage of three year rate is that salesmen may actually have his car four or five years, thus exhausting his depreciation in three years time. Thus, a car bought in January, 1943 and depreciated in three years would have its last depreciation written off in 1945. In a situation involving such a car purchase where the taxpayer had previously not taken depreciation it would be disadvantageous to set up a three year depreciation table, as two-thirds of such depreciation has passed, even though not taken in previous tax returns. If expected life will extend through 1946 and 1947 such a taxpayer should establish a five year depreciation schedule, thus recovering 60 percent of depreciation in 1945, 1946 and 1947 tax returns.

Certain personal deductions to which the taxpayer is entitled should be carefully reviewed for possible oversights. These include:

Loss from theft, either cash or property, either business or personal, but only to extent not covered by insurance;

Loss from accident, storm, hurricane, fire, flood, etc., either to business or personal property, to extent not covered by insurance.

Few taxpayers living in community property states yet appreciate the advantage to them by such residence taxwise. In these states, even though one spouse earns all of the income, half of such community income is the other spouse's by right, and such income may be divided equally and each spouse make a separate return.

Thus, a taxpayer may have say $4,000 subject to surtax of $840 on a joint return. Divided into two separate returns of $2,000 each, the total surtax on each would be $400 or a surtax saving of $40.

Community property states are Arizona, California, Idaho, Louisiana, Nevada, New Mexico, Oklahoma, Oregon, Texas and Washington. Most of these states are of Spanish origin and the law is well established and is recognized by the Treasury Department in respect to separate filings. However, the Oklahoma law is a recent statute which has been challenged by the Treasury and on appeal to the United States Supreme Court, an Oklahoma taxpayer's plea was denied. At this writing, then, it is doubtful whether Oklahoma tax-

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payers may avail themselves of their community property statute.

Taxpayers should note that surtax exemptions for dependents have been liberalized. Each exemption permits a $500 deduction. Nor is it necessary to pro rate. For instance, a child born any time during the year would entitle a taxpayer to a full $500 exemption. Likewise, death of a dependent during the year would not need to be pro rated. Determination is that dependent must have been furnished more than half of his support by taxpayer. Also, age now has no bearing on dependent's status, the fact of dependency, itself, being all important. Thus, children over 18, if actually dependent, may be so shown. However, one who has $500 or more income may not be considered a dependent for tax purposes and such person, himself, must make a tax return.

Trade-Marks, Patents and Reconversion

(*Continued from page 471*)

schedule you will have protection in those countries assured. And since this has become a fast moving, fast thinking world, there is no better time than now to do, that planning as part of your reconversion.

The time and effort you expend now to lay out your trade-mark and patent stakes in foreign areas will amply reward you in the future when you see your claim adequately established and your goods paying off in sound dividends.

*This is the fourth in a series of articles on trade-mark problems especially written for this magazine.

Britain's Retail Drug Trade

(*Continued from page 472*)

of retail competition was negligible, the battle has again been joined.

The cooperative chains in both England and Scotland have announced their intention of developing to the maximum limit, and this is a threat that cannot be ignored, since pharmacy departments have up until now been neglected in the cooperative movement. The threat is more severe in that it carries with it the promise of a service comparable to that conducted by the independent pharmacist, for the cooperatives will be staffed by competent, qualified men attracted to the organization by the payment of good wages, the promise of early promotion in a developing group, and a chance to rise to executive power in what is largely a democratic organization offering scope to competent and ambitious workers. Compared with the prospect of finding capital to buy into an existing pharmacy, or to serve as an assistant or manager permanently, this other route may readily prove attractive. A con-

siderable effort is now being made by the cooperative chain to recruit qualified and keen men from the ranks of independent pharmacies, which is the only possible source of such assistants. Men and women so recruited are being trained for management posts in new pharmacies planned to operate in areas not now served by existing cooperative society branches, the policy of the organization being to leave development to local societies but to step in wherever the local society fails.

Another growing challenge comes from the great mass of general retailers who are now selling made-up medicines, proprietary lines, and branded pharmacy goods. The tremendous number of retail changes—all of which are now legally controlled in Britain, and under the control the nature of the business must not be divulged—show that made-up medicines are an important part of their trade. This business will undoubtedly grow since many manufacturers in the field are adopting the policy of finding as many retail outlets, in or out of the professional pharmacy field as they can.

The pharmacy chain groups are also a major factor in the position. These nationally organized and very excellent groups now cover Great Britain, but it would be unwise to imagine that they have reached their peak, and they must now begin planning further expansion. They dominate the central city areas, select their sites scientifically, operate a service which can seldom be criticized, and generally operate on lines which make them dominant in the busy shopping areas, although less important in the smaller towns or in the suburbs of the larger towns.

The national chain store groups and departmental groups are also in this fight for drug and cosmetic business. It is not likely that Woolworth, Marks and Spencer, Great Universal, and allied and similar chains will watch competing and individual chains operate in this manner without due response. They too are becoming increasingly important in every town and suburb in Britain, and they carry as full a line of proprietaries as any of the major pharmacy groups. They are limited of course, to proprietaries since they do not generally dispense, but there would seem to be no grounds for believing that they could not, or would not develop along pure pharmacy lines, should they regard the income as justifying the employment of suitable personnel. Some already do and the practice could develop extensively.

There are many other factors and cross-currents operating in this most interesting situation which promises to gather speed within the next year or two. New shops and stores can scarcely be built while housing is more urgently needed. But the purchase of existing shops and their conversion into chain branches is a fact which already stares British pharmacy in the face. An increasing volume of such purchases and conversions must be anticipated until such time as conditions permit the building of new premises.

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Ear Preparations

(Continued from page 466)

Sulfanilamide	**5.0 per cent**
Urea	**10.0 per cent**
Chlorobutanol	**3.0 per cent**
Glycerine, to make	**100.0 per cent**

Another proprietary brand of ear drops, with 3 per cent of sulfathiazole as the bacteriostatic agent and 5 per cent saligenin as the topical anesthetic, is something of a departure from the usual run of such products. In this case the base is propylene glycol rather than the well-established glycerine vehicle.

When using sulfa-containing ear drops or other preparations, one must not overlook the fact that some persons are quite sensitive to these agents. In such instances use of the preparation must be discontinued. Valuable by themselves or as adjuvants to oral sulfonamide therapy, sulfa-containing ear drops appear to be especially useful in the local treatment of chronic discharging or "running" ears.

In treating and cleansing the discharging ear, the "dry" or the "wet" method may be used and each type of therapy has its own advocates. As is quite obvious, various solutions are used in the wet treatment of the suppurating ear. Irrigation may be carried out with solutions of boric acid or sodium bicarbonate or with hydrogen peroxide, followed by careful sponging out of excess solution. Frequently useful is a 2 per cent urea solution. Following irrigation, alcoholic solutions are instilled into the ear. Thus, after syringing, the ear canal may be filled with an alcoholic solution of boric acid or with a 10 per cent solution of urea in 70 per cent alcohol; the fluid being retained in the ear for five minutes.[18] Lawson[28] suggests the use of a solution consisting of equal parts of saturated boric acid solution and 95 per cent alcohol to be instilled one to three times daily.

A further modification is the addition of iodine to the popular saturated solution of boric acid in alcohol:

Tincture of iodine	**0.5 cc.**
Boric acid	**4.5 Gm.**
Alcohol	**100.0 cc.**

Used as ear drops, the evaporation of the alcohol leaves a boric acid-iodine film in the infected ear.[18] Alcohol, in various strengths, finds quite extensive use in treating discharging ears.[29]

A few years ago reports appeared advocating silver picrate for treating discharging ears. Vanstane[30] recommended the instillation of a 0.5 to 1 per cent solution of silver picrate in sufficient quantity to fill the canal, after cleansing with boric acid swabs or irrigation with boric acid solution. Earlier, Gray[31] had found that treatment with 0.25 per cent aqueores picric acid solution containing 8 per cent glycerine, followed by an autoclaved suspension of 20 Gm. of calcium carbonate in 215 cc. of water was a valuable therapeutic aid in

treating purulent otitis media and post-mastoidectomy cases.

Ear drops containing sulfa drugs, such as those previously described are also useful for treating running ears. In addition, aqueous solutions and suspensions of these drugs have found frequent application in the ear canal.[28, 32] Desoxyephedronium sulfathiazole, developed by Turnbull and his associates for treating sinusitis and other upper respiratory tract infections,[33] has also found valuable use in the aural canal.[34] This last, however, has already been discussed in some detail in this publication.[35]

It has been said that Calot's fluid, originally devised for treating cold abscesses and tuberculous swellings, is a most potent agent for drying up a discharging ear. According to Fantus,[15] Calot's fluid consists of:

Guaiacol	**1.0 cc.**
Creosote	**2.0 cc.**
Iodoform	**7.0 Gm.**
Ether	**50.0 cc.**
Olive oil (sterilized)	**40.0 cc.**

In the "dry" method of treating the discharging ear, irrigations are forbidden in the belief that moisture encourages bacterial growth. Except for the initial swabbing with some mild antiseptic solution to remove crusted discharge, the canal is cleaned with dry applications prior to the insufflation of powders. Sulzberger's iodine and boric acid powders, originally developed in 1915, are widely used and are considered among the most satisfactory products for the purpose.[15, 28] Generally supplied in two strengths, 0.75 and 2 per cent,[27] iodine concentrations ranging from 0.65 to 10 per cent have been employed.[15, 36] A typical formula for Sulzberger's powder is as follows:[15]

Iodine	**0.75 Gm.**
Ether	**10.00 cc.**
Boric acid powder	**100.0 Gm.**

Insufflation of urea crystals has also been recommended.[15] Potassium perborate or boric acid powder may also be helpful in dry treatments. Zinc peroxide has been used but is difficult to remove.[28] This last brings to mind the warning that insufflation of insoluble powders is contraindicated in the discharging ear, because the powder and pus may form a deposit difficult to remove and which may dam up the discharge. Where insufflation is employed, only water-soluble powders are permissible.

Although not as common as middle ear infections, conditions involving the external ear are quite prevalent. The auditory canal is a favorable site for the development of certain skin infections, among which boils and fungus growths are common examples. Furuncles or boils in the ear do not differ essentially from those in other parts of the body, except that swelling is more diffuse, covers a larger superficial area, and frequently almost occludes the canal in the early stages. They are also more painful.

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Early incision of such boils is seldom attempted. Rather, it is general practice to apply heat and to insert a strip of gauze saturated with a suitable medicament. Preparations of this type aim at softening the skin to relieve tension, at lessening pain, and at creating conditions favorable to the formation of a "head" on the furuncle. Many preparations have been suggested for this purpose. Fantus,[15] for example suggests that the gauze be saturated with an alkaline antiseptic solution, such as a 1 or 2 per cent dilution of Saponated Solution of Cresol.

Heatly,[37] some years ago, recommended the use of gauze wicks soaked with a dilute solution of aluminum acetate made by diluting one volume of Burow's solution with two volumes of water. Ten per cent ichthammol in glycerine is frequently used, as a glycerite of phenol and ichthammol, made as follows and dropped into the ear every two hours or applied directly by means of gauze packings:

Phenol	**0.65 Gm.**
Ichthammol	**7.50 Gm.**
Glycerine	**30.00 cc.**

In his comprehensive discussion of external ear conditions, Evans[38] listed many of the preparations advocated for treating pyogenic infections. Alcoholic borix acid solutions, iodine in glycerine, and solutions of aluminum acetate, in his experience, were satisfactory for alleviating both pain and swelling.

In this connection it should be pointed out that the modern sulfaurea combinations in glycerine have also been indicated as valuable in circumscribed furunculosis of the external auditory canal.

Dermatitis of the external ear may be caused by a number of organisms. According to Senturia and Wolf,[39] the agents most frequently used in the treatment of external otitic infections at present are applications of 95 per cent alcohol alone or in combination with boric acid or with 1 per cent thymol. Two per cent salicylic acid in 70 per cent alcohol is also listed and has been found to be highly efficient in treating fungus infections of the ear.[29, 37, 38] Many other drugs have been employed to combat fungi, which are considered among the most important causes of ear dermatitis.

Searcy and McBurney,[40] who have made an extensive study of the subject, consider metacresyl acetate the most effective agent for use as a fungicide in otomycosis. Gill,[41] also an authority in this field, prefers a powder consisting of:

Iodine	**2.0 Gm.**
Tricresol	**1.0 Gm.**
Thymol	**1.0 Gm.**
Boric acid powder	**100.0 Gm.**

Not overlooking the sulfas, Senturia and Wolf[39] are of the opinion that the local application of powdered sulfanilamide is cases of external otitis caused by fungi other than *Monilia* should be accompanied by beneficial results.

Ear wax or cerumen in moderate amounts is a normal

secretion of the glands in the external ear canal and serves as a protective device against dust and insects. When an excessive quantities of wax accumulates, however, it may become impacted and interfere with hearing. Instrumentation to remove wax is seldom advisable because of the danger of injuring the ear drum. Various other means can be used to safely remove such accumulations. Solution of hydrogen peroxide may be used, followed in a few minutes by syringing with warm water.[15] World-wide usage seems to indicate that peroxide solutions and 4 per cent sodium bicarbonate suspended in glycerine are safe and efficient for removing cerumea from the ear.[42] If desired the glycerine may be diluted with equal parts of water.

Foreign bodies in the ear may cause only slight discomfort, but attempts to remove such objects often result in damage to the canal or to the ear drum, or both. While such object must not be permitted to remain in the ear, their removal is best left to the skilled hands and instruments of the physician. When an insect gets into the ear, filling the canal with tepid water or glycerine may float the insect out. Failure of such simple measures means that expert help is needed.

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DISINFECTANTS AND STERILIZATION: I have been doing some work on antiseptics and I would appreciate the suggestion of a good modern text on antiseptics and disinfectants. Richmond.

About the only text devoted exclusively to this subject is "Disinfectants and Sterilization" by E. C. McCulloch. Of course, most text books on bacteriology carry a comprehensive chapter on this subject. One text which I can recommend is "Fundamental Principles of Bacteriology" by A. J. Salle.

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Glycerin Market Strong

(*Continued from page 473*)

large orders have been placed in this country by Belgium. In years gone by, Germany was the potash center of the world and we bought the great bulk of our supplies from Germany as did other countries including Belgium which is right next door to Germany. But now the orders are coming here. Belgium is buying very heavily in this country and other countries of the world are now, or will soon be doing likewise. These foreign orders will add to our difficulty in keeping production of all items abreast of demand and the time of slack conditions does not yet appear on the horizon.

The Drug Industry's Post-War Program

(*Continued from page 461*)

sonal efforts. When taxes are reduced to the point that risk of capital and increased energy on the part of individuals are rewarded, then we can expect to see this country move forward with great rapidity in a business way.

It is the recognition of this possibility that should keep people of the country from losing their morale and thinking that the country is going to the dogs because we happened to be burdened with strikes and other troubles. At the moment it is harder to get labor and materials in many instances than it was during the war and orders are continuing to flow in at an overwhelming rate. However, the change from peace to war was far from pleasant but we eventually got used to the war-time basis and took it in our stride. We all knew—or at least we expressed the view—that the change back to peace would be much more difficult. Well we are now going through it and many are grumbling because we are having difficulties which we all knew we were going to have. During the next six months or so reconversion to a peace basis will have been accomplished and the problems of reconversion will look like nothing in retrospect.

CREAM STABILITY TESTS: We would appreciate receiving any information you might be able to send us regarding tests that could be used to determine the stability of cosmetic cream. Summit.

Tests of this sort need not necessarily be complex. Stability can be determined, for example, by placing one sample in a refrigerator, preferably the freezing compartment, and another sample in an oven at about incubating temperature.

One of the simplest and most effective tests for the stability of a cosmetic product is to mail a package of the material across country and to have it returned unopened. This will give a pretty indicative evaluation of the way a cosmetic product will stand up.

READERS' QUESTIONS

FORMULATION VALUES: In the April issue of DRUG AND COSMETIC INDUSTRY *you published a formula which I would like to use. Will you please let me know whether the parts were by volume or by weight? Plainfield.*

When exact values concerning weight or volume are not given in a formula it is generally assumed that the ingredients are mixed on the basis of parts by weight.

OIL-FREE SUNTAN LOTION: One of my clients has requested a formula for a suntan lotion without any oil in it. I recall that some time ago I saw a series of such formula in "Drug & Cosmetic Industry." It also seems to me that one of them contained a small proportion of tannic acid. Could you provide me with a formula of this type? Brooklyn.

A formula of the type which you appear to want is as follows:

Alcohol	42.9
Water	50.0
Tannic acid	5.0
Screen	2.0
Color	0.1

Transparent lotions consist of alcohol or water-soluble screens dissolved in water-alcohol mixtures. If the screen is soluble in alcohol, make a relatively concentrated solution and then dilute with water. Solubility will vary considerably, but mixtures can generally be made with from 40 to 60 per cent of alcohol. A higher concentration than this may be irritating to some skins, while a minimum of about 30 per cent should be present to increase the rate of evaporation. A few per cent of glycerin are useful for emollient effect. Tannin may also be included partly to relieve slight burn, but primarily to form a coating to assist the screen in adhering to the skin. Preliminary choice of the screen to be used in suntan preparations should be made from absorption data supplied by most manufacturers in connection with their screens.

NON-STAINING COAL TAR: There seem to be a few ointments with deodorized coal tar. Would you be kind enough to advise me how coal tar can be deodorized? New York City.

I am not aware that a deodorized grade of coal tar is available nor can I understand how such a product could be made because most of the components of coal tar have distinctive odors. Perhaps what you mean is a synthetic, non-staining coal tar, which is made up as follows:

Anthracene	1.10
Naphthalene	10.90
Phenanthrene	4.00
Carbazole	2.30
Picolene	0.58
Pyridine	0.58
Quinolene	0.59
Phenol	0.70
Cresol	0.75
Petrolatum to make	100.00

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LIQUID DEODORANT: We are interested in a liquid deodorant and we would be greatly pleased if you can give us a formula along this idea. Los Angeles.

A fairly simple liquid deodorant can be made from:

Aluminum chloride	15.0
Water	81.4
Glycerine	3.0
Propyl parahydroxy benzoate	0.1
Perfume	0.5

LUBRICATING JELLY: We are manufacturing a water soluble lubricating jelly and we are meeting formula difficulties. Can you advise us of a good formula containing tragacanth, glycerine, etc.? Cincinnati.

A quite comprehensive article on such products appeared in the December 1944 issue of Drug & Cosmetic Industry, from which I take the following typical formula:

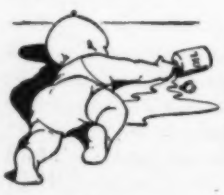
Tragacanth, selected ribbons	25.0 Gm.
Boric Acid	12.5 Gm.
Alcohol	40.0 Gm.
Glycerine	80.0 Gm.
Solution of formaldehyde	4.0 cc.
Methyl salicylate, 1% alcoholic solution	40.0 cc.
Water, to make	1000.0 Gm.

Dissolve the boric acid in the water and macerate the tragacanth in this solution. Strain through fine cheese cloth and add the remaining ingredients and, finally, sufficient water to bring up to the required weight. Mix thoroughly.

SKIN REFRESHER PROBLEM: We put out a skin refreshner and one of the ingredients we use is tincture of benzoin. This gives it a milky appearance, but after the preparation stands for a while, it will fade and a powdery substance settle at the bottom. Thought possibly you may be able to suggest something we may use that would overcome this condition. Thanking you for your kindness. Madison.

I would attribute the difficulty to the precipitation of the resins and tannins in the gum benzoin. The formation of a milky solution is due to the precipitation of these substances upon the addition of water to the tincture. The powder at the bottom of the bottle is the end resuult of this precipitation. The only way to keep the benzoin constituents in solution is to use a higher proportion of alcohol or to eliminate benzoin entirely from the formula and replace it with other astringent and aromatic substances.

ANTISEPTIC BABY OIL: We are wondering if you would be good enough to mail us the formula for an antiseptic baby oil. Kingston.



A formula along the lines you request may be made from:

Olive oil	4 oz.
Chlorothymol	30 gr.
Oil of rose	30 min.
White mineral oil, to make	24 oz.

ENTERIC COATINGS: We are interested in a process for sealing tablets. We have been using for this purpose a seal made of shellac. This is not very satisfactory due to the necessity of using so much glaze that the results pass through the patient without breaking up. We wonder if there is anything that could be put on the tablets in conjunction with the glaze which would make the sealing process fool proof and at the same time provide for a satisfactory use of the finished process? Kenton.

European workers have used a solution containing shellac, anhydrous lanolin and alcohol as medium for making enteric pill coatings. Powdered gum acacia was employed as a dusting material after the first coating and talc was used thereafter for each additional two coats. A rather complete article on enteric coatings appeared in the August 1941 issue of Drug & Cosmetic Industry and two quite interesting papers have been published in the May 1945 Scientific Edition of the "Journal of the American Pharmaceutical Association". I would suggest that you check these articles as a means of helping you in your problem.

COLD SORE OINTMENTS: I am interested in a product generally described as a cold sore salve or ointment. Perhaps you can enlighten me on a working or basic formula. Little Falls.

Perhaps something along the following lines will serve your purpose:

Tincture of benzoin	**20.0**
Balsam of Peru	**10.0**
Cold cream	**70.0**

Heat the cream. Stir in the benzoin and the balsam. Stir until smooth and uniform in color. If a more rounded product is desired, you might try the following:

Lanolin anhydrous	**18.0**
Absorption base	**10.0**
Benzocaine	**0.5**
Vegetable oil	**20.0**
Phenyl mercuric nitrate (1:5000)	**0.5**
Spermaceti	**10.0**
Water	**41.0**

MILKY SHAMPOO: Will you kindly furnish us with a formula for a milky shampoo. Minneapolis.

Milky shampoos consist essentially of various soap solutions into which mineral oil, lanolin and similar materials have been incorporated by emulsification. Illustrative of such products is the following milky hair wash containing kerosene as an active ingredient:

Trihydroxyethylamine stearate	**10**
Kerosene	**150**
Pine Oil	**6**
Water	**250**

Heat the trihydroxyethylamine stearate and kerosene to 140°F. and stir until dissolved; then stir in the pine oil. Now allow the water to run in slowly while stirring. If the pine oil is objectionable, however, any other oil may be substituted for it. It may be colored by means of a suitable water-soluble dye free from salt.

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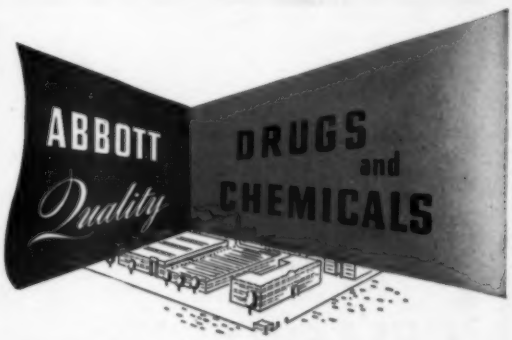

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(Continued from page 538)

Hydrogenated Castor Oil Bases

Because sulfated hydrogenated castor oil is hydrophylic, it occurred to G. W. Fiero and T. A. Loomis (J.A.Ph.A., *Scientif. Ed.* 34:218, 1945) *that it might have better properties than the official ointment bases for antiseptic medicaments, particularly in cases where the antiseptic is soluble in water. Ointments were prepared using the same strength of active constituents as the official ointments, substituting the castor oil base for the official base. In the case of water-soluble medicaments, they were dissolved in or moistened with water prior to incorporation with the following base:*

Diethylene glycol monostearate	**10 Gm.**
Sulfated hydrogenated castor oil	**20 Gm.**
Petrolatum	**30 Gm.**
Water	**40 Gm.**

Bacteriological tests and comparisons of thirteen antiseptic ointments indicate that the antiseptic value of those made with the above sulfated, hydrogenated castor oil base is equal to or superior to the official ointments.

Sulfonated Products as Pharmaceutical Aids

In presenting several practical points in pharmaceutical manufacture, R. Presslie (*Pharm. J.* 154:279, 1945) remarks that sulfonated fatty alcohols and sulfonated oils, in the form of sodium salts, are being used as detergents and emulsifying agents in various industries. In cosmetics, for example, these agents are used in soapless shampoos, in tooth paste and in toilet preparations designed to assist in the removal of make-up. They have not been used to any great extent, however, in pharmaceutical manufacture, although they have useful emulsifying properties.

Using sodium lauryl sulfate as a typical product, Presslie illustrates the use of such materials in making acriflavine emulsions. Thus a cream similar to acriflavine emulsion B.P.C. may be made as follows:

Acriflavine	**0.1 Gm.**
Cod liver oil	**32.0 cc.**
Petrolatum	**32.0 Gm.**
Sodium lauryl sulfate	**3.0 Gm.**
Water, to make	**100.0 cc.**

The petrolatum and the oil are mixed together. The acriflavine and the sodium lauryl sulfate are dissolved in the water and the aqueous solution added in small quantities with constant trituration to produce a cream. This cream, which is of the w/o type, can replace the standard acriflavine emulsion; the cod liver oil being a useful adjuvant for the treatment of burns.

Since some authorities favor an o/w preparation of acriflavine, a formula for such a product is included:

Cod liver oil	**40.0 cc.**
Lanette wax SX	**5.0 Gm.**
Sodium lauryl sulfate	**2.0 Gm.**
Water	**53.0 cc.**
Acriflavine	**0.1 Gm.**

Heat together the wax and oil, dissolve the antiseptic dye and the sulfate in warm water and add the emulsion and stir until cool.

Because ointment bases, especially those of the water-miscible, washable types, have been the subject of considerable controversy, Presslie ventures to add only one such base to the legion of oil-in-water bases already available:

Spermaceti	**15.0 Gm.**
Soft paraffin	**12.0 Gm.**
Liquid petrolatum	**12.0 cc.**
Sodium lauryl sulfate	**1.0 Gm.**
Water	**60.0 cc.**

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The first four ingredients are melted together. The water may be added to this and the mixture stirred until cool, or the oily mixture may be allowed to cool and the water incorporated by cold-mixing when required. An ointment base prepared with lauryl sulfate has the advantage over its "vanishing-cream-type" contemporary in that it is neutral.

Powder for Sweating Palms

In response to an inquiry concerning treatment of a severe case of hyperhidrosis of the palms, it was pointed out in the British Medical Journal (2:203, 1945) *that such a condition is the result of an emotional disturbance and calls for investigation along such lines. As a palliative for the condition it was suggested that "puddling" in a 10 per cent solution of sodium hexametaphosphate night and morning might be helpful. As an alternative the free use of a special dusting powder was recommended as helpful; such a powder consisting of: 2 per cent salicylic acid and 5 per cent sodium hexametaphosphate in a base consisting of equal parts of zinc oxide, talc and boric acid; all ingredients being powdered and thoroughly mixed.*

"Sulfagel" Burn Films

The use of prefabricated films, now finding increasing acceptance in the therapy of burns, makes most pretinent a report by H. L. Flack, D. A. Clark and L. F. Tice (*J.A.Ph.A.* 34:187, 1945) on the development of a new gelatin film-forming product called "Sulfagel." Using a special grade of gelatin (Pharmagel B), an extensive series of studies were undertaken employing this gelatin with sulfonamide drugs in an attempt to develop a dressing for burns which would embody the advantages of a preformed film but eliminate some of the disadvantages of older products. The various modifications employed have centered about four base formulas, the last of which, given below, appears to be the most desirable:

Sodium sulfadiazine	**25 Gm.**
Pharmagel B	**50 Gm.**
Sulfadiazine	**45 Gm.**
A-3 Water	**100 Gm.**

This preparation was autoclaved at 5 lb. for thirty minutes and placed in sterile containers.

The A-3 water, specified in this and other tested preparations is distilled water containing 0.52 Gm. methyl *p*-hydroxybenzoate and 0.28 Gm. propyl *p*-hydroxybenzoate per 1000 cc. used to prevent mold growth, etc., in the gelatin.

Preliminary experimental evidence indicates that such a sulfagel, compared to other film-forming material, gives earlier and better granulation in burn therapy and presents a transparent dressing which possesses certain advantages. It is pointed out that gelatin appears to be a most desirable vehicle for the presentation of many locally effective drugs. The sulfonamides have been examined but, in addition, there are other drugs that might obtain greater utility were they used in a gelatin base. Gelatin approximates the protein composition of the body, it does not produce foreign body reactions when applied to injured tissues, it is readily diffusible and miscible with tissue fluid and carries active agents more readily in this fashion, there being no occlusion.

Reprints on Wool Wax Alcohols

The several comprehensive articles on lanolin and wool wax alcohols, prepared by E. S. Lower and published in British periodicals are now available as reprints. Abstracts of significant parts of these reports have appeared in Drug and Cosmetic Industry. *Reprints may be obtained by writing to Croda, Ltd., Rawcliffe Bridge, Goole, Yorks, England.*

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ADVANCING THERAPY

(*Continued from page 533*)

Streptomycin's Potentialities

During recent months considerable interest has been focused upon streptomycin, an antibiotic from actinomyces, a class of molds that seem to be half fungus and half bacteria. According to a recent Associated Press report, considerable work on the purification and application of streptomycin is being done at the University of Illinois. Earlier in the year, H. W. Anderson, head of the group studying the biological aspects of this antibiotic agent, stressed the potentialities of streptomycin. He noted that results with experimental animals at Mayo Clinic at Rochester indicate that such diseases as tularemia, typhoid fever, certain types of dysentery and even tuberculosis may yield to this drug. In addition, it is effective against practically all the diseases now cured by penicillin, and some of the penicillin-resistant types yield to streptomycin.

The studies at the University of Illinois indicate, however, that even if it should prove successful with humans, streptomycin probably never will supplant penicillin, but would be used instead as a companion drug, since penicillin can be produced more cheaply. It is possible that eventually there may be produced a series of antibiotic drugs, none of which would supplant the other, but each of which would have its own special field.

Penicillin and Sulfa Lozenges

In the July 1945 issue of the *U. S. Naval Medical Bulletin*, H. H. Rosenthal reports on the excellent results obtained from the local treatment of severe throat infections with a sulfa chewing wafer and a penicillin lozenge. A chewing preparation containing mixed sulfonamides, made as follows, has been highly effective in cases of severe pharyngitis and mild forms of tonsilitis:

Sulfanilamide	**20.0 Gm.**
Sodium bicarbonate	**2.0 Gm.**
Sulfathiazole	**4.0 Gm.**
Paraffin wax	**16.0 Gm.**
Oil of peppermint	**10.0 min.**

The solids are made into a fine powder and with constant stirring are added to the melted wax and peppermint. The mass is then poured into a mold and divided into twenty tablets. One tablet is administered every two hours; the wafer being chewed like gum.

A gelatin-based lozenge containing penicillin calcium is said to have given remarkable results in cases of follicular tonsillitis and ulcerative Vincent's angina. One lozenge is administered every hour; the patient being advised to permit the lozenge to dissolve slowly in the mouth, generally a matter of about fifteen minutes. Products for this purpose are made as follows:

Sodium citrate	**2.0 Gm.**
Starch	**20.0 Gm.**
Gelatin	**40.0 Gm.**
Sucrose	**60.0 Gm.**
Distilled water	**140.0 cc.**
Penicillin calcium	**100,000 units**
Oil of peppermint	**6.0 min.**

The solids and distilled water are boiled together for three minutes with constant stirring. The mixture is then cooled to about 80° F. and the penicillin salt added with continuous stirring, after which the preparation is poured into a small waxed container, 8 x 16 x 2 cm., covered and stored in a refrigerator. The resulting gel is easily divided into

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forty tablets, providing enough material for two days of treatment.

Of pertinent interest is the finding of P. Greey and J. B. Macdonald (*Canadian M. A. J.* 52:327, 1945) that the use of agar instead of gelatin results in better pastilles or lozenges for the local action of penicillin in patients with Vincent's angina. Such pastilles are made by adding 8 Gm. of agar to 200 cc. of distilled water. If the pastilles are to be kept for several weeks, a preservative (n-Butyl ester of p-hydroxybenzoic acid) may be added. Autoclave for 30 minutes and while still hot filter through nonabsorbent cotton. Collect the filtered agar in a flask and place in a water bath at 50-55° C. When cooled to about 50° C. add the desired quantity of penicillin solution. Mix thoroughly and make into pastilles 5 mm. thick. The resulting pastilles have a diameter of 13 mm., weight about 0.6 Gm. and have a pH of 6.5. The use of suitable glass tubing facilitates the shaping and cutting of the pastilles.

Pastilles made in this way persist in the mouth for at least four hours, as contrasted with one-half to one hour for gelatin lozenges, during which time a bacteriostatic concentration of penicillin is maintained in the saliva. The number of pastilles and the quantity of penicillin required daily is thus considerably reduced. Agar-penicillin pastilles are also easier to make than those based on gelatin.

Fibrin Film as a Dural Substitute

The need for a material which acts as a substitute for excized or injured dura mater (one of the brain coverings) and at the same time prevents meningocerebral adhesions has long been one of the most pressing in neurologic surgery. In the course of a program devoted to the fractionation of human blood plasma, large quantities of human fibrinogen and thrombin have become available. From these proteins it has been possible to prepare a material, fibrin film, which has been subjected to experimental and clinical trial as a dural substitute by F. D. Ingraham, O. T. Bailey and C. A. Cobb, Jr. (*J. A. M. A.* 128:1088, 1945). Their studies of fibrin film show that it has great advantages over any other dural substitute now available. In addition it is prepared on a large scale; it is stable at ice box temperature for over a year and at room temperature for many months; it is easy to use in the operating room.

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